FOUR TREATISES OF Physick and Chirurgery:

VIZ.

I. A Physico-Medical *Essay* concerning *Alkaly* and *Acid.*

II. Farther Considerations by way of *Appendix* to the said Essay.

III. *Novum Lumen Chirurgicum,* or a New Light of Chirurgery.

IV. *Novum Lumen Chirurgicum Vindicatum,* or the New Light of Chirurgery vindicated from many unjust Aspersions.

By JOHN COLBATCH, *a Member of the Royal College of Physicians,* London. & Tho: Haughton

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The Second Edition Corrected and Enlarged.

LONDON,

Printed by *J. D.* for *Daniel Brown* at the *Black Swan* and *Bible* without *Temple-Bar.* MDCXCVIII.

A

Physico-Medical ESSAY

CONCERNING

ALKALY and ACID,

SO FAR

As they have relation to the Cause or Cure of DISTEMPERS.

WHEREIN

Is endeavoured to be proved, that *Acids* are not (as is generally and erroneously supposed) the Cause of all or most Distempers, but that *Alkalies* are.

TOGETHER

With an Account of some *Distempers*, and the *Medicines*, with their *Preparations*, proper to be used in the Cure of them.

AS ALSO

A Short Digression concerning Specifick Remedies.

By *JOHN COLBATCH*, Physician, a Member of the College of Physicians, *London*.

The Second Edition corrected and enlarged.

London, Printed for *D. Brown* at the *Black Swan* and *Bible* without *Temple-Bar*, 1698.

To the Right Honourable

Sir HENRY BELLASIS,

Lieutenant-General

OF

His Majesty's Forces.

Honoured Sir,

DEdications are at this time grown so much in fashion, that a *Book* which appears in the World without one, is scarce look'd upon by any body; People thinking that the *Author*, who omits a thing so generally prac-

tiſed, is altogether deſtitute of a *Friend* who is capable of protecting and countenancing him; and for that very reaſon only, let the merit of the *Book* be never ſo great, few people will give themſelves the trouble of reading any more than the *Title-page* alone. To prevent which, and at the ſame time to manifeſt my *Gratitude* for the manifold *Favours* you have been pleas'd *generouſly* to heap upon me, I have preſumed to prefix your *Name* to the following *Eſſay*. I cannot flatter my ſelf ſo far as to think there is any thing in it worthy to entertain a Perſon of your *Parts*: But ſince it comes from one

one who is filled with a ſenſe of *Gratitude*, I have ſome reaſon to hope that it may meet with a kind *Acceptance*; I very well knowing that ſmall things have ſometimes a *Value* ſet upon them, eſpecially when they are made the *Offerings* of *Reſpect*, *Eſteem*, and *Gratitude*. It would be too great an *Honour* to me to tell the World with what readineſs you have appeared to ſerve me at thoſe times when I have ſtood moſt in need of your Aſſiſtance: For which I cannot better expreſs my *Gratitude*, than by a Silence full of *Admiration*: For let me ſay never ſo much, I ſhould ſtill fall ſhort of my Du-

ty. This *Piece* is properly Yours, it being under Your *Umbrage* that I have been enabled to write it. And if, out of your wonted *Generoſity*, You ſhall be pleaſed to caſt a *favourable Aſpect* upon it, it will afford the greateſt Satisfaction to him, who is,

Honoured S I R,

Your moſt obliged

and moſt Obedient Servant,

JOHN COLBATCH.

TO THE READER.

IT *may be much wondred at, that I ſhould in the leaſt preſume to meddle with this Subject, that has already been handled by ſo many very* Great Men. *But when it ſhall be well conſidered, in how much different a manner I have treated upon it from what hath been hitherto done, I queſtion not, but by the generality of* Mankind *I ſhall be very eaſily excuſed: And tho there may be many imperfections met with; yet when the Deſign of the thing (it being to undeceive people in a matter, upon which depends the* Health *and* Welfare *of all) ſhall be well lookt into, I doubt not, but by the candidly Ingenuous my* Undertaking *will be well approved of: Tho I expect to meet with a great number of* Carpers, *eſpecially amongſt thoſe, who by long cuſtom, and for want of due* Conſideration, *have embraced a contrary* Opinion *to that of mine.*

It

It is ſcarce poſſible for a Man to converſe with a Perſon that is ill, let the Diſtemper *be what it will, eſpecially thoſe who have any ſmattering in* Phyſick, *which moſt people now a days have, but they preſently tell you, that their* Blood *is ſo very* acid, *that unleſs that* Acidity *can be corrected, it is impoſſible for them to be well: And accordingly they preſently fly to the uſe of* Alkalious Medicines, *as Pouder of* Pearl, Coral, Crabs eyes, *or ſomething of the ſame nature; and if they ſend for a* Phyſician, *which few people do,* [*eſpecially in* Chronical *Caſes*] *till they have firſt uſed a vaſt* Farrago *of* Alkalious Medicines; *and if the* Phyſician *chances to take the ſame Method that they themſelves had before done, they preſently cry out, We have already taken ſuch vaſt quantities of the beforementioned* Medicines, *that unleſs you can think of ſome more generous and efficacious* Alkalies, *the* Acids *complained of are not to be* mortified; *which has put Men to great ſhifts either to find out new, or to diſguiſe the old ones: yet after all, the* Patients *Expectation has been fruſtrated, their* Diſtempers *not being to be cured by* Medicines *of that nature; but on the contrary either to be exaſperated, or ſo confirmed, that they will ſcarce ever admit of a Cure at all, eſpecially if the* Diſtemper *be a* Chronick *one.*

I

I must confess, that I my self have formerly been a Stickler for Alkalies *(being carried away by the common Vogue of* Mankind*) and seeing the insufficiency of common* Alkalies, *have put my self to great expence, besides a vast deal of trouble, to* volatilize *Salt of* Tartar, *&c. till at last I was fully satisfied, by daily observation, that* Alkalies, *tho never so exalted, would do me very little, if any service at all in the cure of most* Distempers.

There are some particular Preparations of Steel *and* Antimony, *some of which I have given an account of; the which giving as* Alkalies, *and as they are generally believed to be, did me very great Service. But since I have well examined them, instead of* Alkalies, *I find them to be most noble* Acids, *and the* Distempers *cured by them did not (as I formerly supposed) proceed from any abundance of* Acid Particles *in the* Blood *or* Juices; *but on the contrary from* Alkalious *ones, as I suppose most* Distempers *do, and as I have endeavoured to make appear by many* Observations.

I expect a great many will cry out, as some have already done, That this Man was bred an Apothecary, *and shall he pretend to be a Reformer in* Physick *and* Surgery?

To which I anſwer, That their Charge I own, confeſſing my ſelf to have been an Apothecary, *and was bred up under a Man (tho otherwiſe a very honeſt and juſt* Perſon) *that was not the greateſt* Maſter *in his Buſineſs. I taking notice of my* Maſter's *Imperfections, applied my ſelf for four Years of the time I lived with him to diligent Study, in order to become* Maſter *of thoſe things I was ſenſible my* Maſter *could not teach me. And after I had well conſidered, and in ſome meaſure become a* Maſter *in* Pharmacy, *which is the* Foundation *upon which the* Practice *of* Phyſick *is built, I was at laſt induced to look into the* Body *of* Phyſick *it ſelf; and tho I don't pretend to abſolute* Maſterſhip, *yet I ſhall endeavour, and think my ſelf obliged in Duty both to* God *and* Man, *to improve my ſmall* Talent *to the beſt advantage I can, let* Carpers *ſay what they will.*

The greateſt part of my time I lived in Worceſter; *and altho I kept an* Apothecaries Shop, *yet my Dependance was wholly upon my own* Practice, *the Succeſs I had in which is ſufficiently known in that* Country. *And for a* Character, *I deſire no other or better than the generality of thoſe People will give me, of whom I know not one that can or will ſpeak amiſs of me for any thing, but my coming a-*

away

way from them, and leaving ſuch flouriſhing, thriving Buſineſs that ſcarce any Man of my Age ever had before me; for which many of them have blamed me: but the Reaſons of my leaving that Place are beſt known to my ſelf.

And ſince I have been ſpeaking concerning my own being bred an Apothecary, *I ſhall enlarge a little upon that Subject, giving a ſhort account of the neceſſary Qualifications of one of that* Profeſſion; *and then ſhall leave every body to judg whether a Man ſo qualified has not made a large ſtep towards being a good* Phyſician.

Firſt, *An* Apothecary *muſt be very well acquainted with the* Vegetable Kingdom, *not only to know the faces of* Plants, *but their* Natures *and manner of Operation upon* Human Bodies; *otherwiſe how can he tell how to handle them, ſo as to make his Compoſitions as they ought to be? And indeed every* Phyſician *ſuppoſes the* Apothecary *ſo qualified, when he preſcribes to his Shop; for in his* Bill *he ſeldom directs the Method of making his* Medicines, *but only orders ſuch and ſuch* Medicines, *knowing, or at leaſt ſuppoſing them (for every* Phyſician *ought to be well ſatisfied in the Abilities of an* Apothecary, *before he preſcribes to him) to be before hand skilfully prepared. For let a* Phyſician *preſcribe like an* Angel, *if the* Apothecary *through his Ignorance*

rance in his Buſineſs, be deſtitute of good and well prepared Medicines, *both* Phyſician *and* Patient *are fruſtrated in their Expectations, the which I am afraid too frequently happens.*

Secondly, *He muſt well underſtand the Nature and Operation of* Minerals *and* Metals, *which is not to be learnt in the* Diſpenſatory, *nor any other way to be attained, but by much reading, and hard labour in the Fire.*

Thirdly, *He muſt underſtand the Nature of* Animal Bodies *alſo, amongſt which is comprehended that of* Man, *of whoſe* Body *there being ſcarce a Part, but what is ſometime or other to be uſed as* Medicine: *but before it is uſed, the* Apothecaries *Skill is for the moſt part required for its Preparation, in order to which he ought firſt of all very well to underſtand its Nature.*

All the forementioned Qualifications, and a great many more, are multitudes of Apothecaries *in* England *endowed with: And to the Honour of the* Apothecaries *of* London *be it ſpoken, I have generally found the meaneſt Shops in this* Eminent City, *better fraited with good Medicines, than any of the moſt* Eminent *in all* Holland, *or the reſt of the* Low-Countries.

I might add a great deal more on the behalf of that noble Profeſſion; *which altho I my*

ſelf

ſelf have left off, yet ſtill I have a high value and eſteem for it, and think an honeſt and skilful Apothecary *is as ſerviceable in the* Common-wealth, *and deſerves as much Incouragement, and is as highly to be valued as any man whatſoever.*

The Famous Etmuller *was not aſhamed to own, that he ſerved eight Years to an* Apothecary: *Yet for all that he afterwards became one of the eminenteſt* Phyſicians *of* Europe: *And for ought I know, the loſs of him at the Age he died, from whom ſo much might rationally have been expected, deſerves as much to be lamented, eſpecially by* Phyſicians, *as the loſs of any one private Man.*

[*And here give me leave to lament the great misfortune that the* Common-wealth *of* Phyſick *at this time labours under, and that is the great* Breach *between* Phyſicians *and* Apothecaries, *or at leaſt between a great number of both* Profeſſions; *which* Breach, *unleſs there can be ſome Method found amicably to compoſe, and to eſtabliſh the antient Friendſhip and Correſpondence between the two* Profeſſions, *there will be ſuch an Opportunity given to the* Quacks, *that in time they will deſtroy both* Profeſſions, *and have liberty to do miſchief to* Mankind *without controul.*

I believe there is a greater number of ſtrowling Quacks *in this Nation than in all* Europe *beſides, who have nothing elſe to recommend them but their Impudence: and the Common People who are not Judges, are eaſily impoſed on by them; and 'tis daily ſeen, that upon the Ruin of* Families *many of theſe raiſe conſiderable Fortunes, and make a Figure in the World.*

Now the only Method that I can propoſe to ſuppreſs theſe Swarms *of* Caterpillars, *is by a hearty and friendly Union between the* College *of* Phyſicians, *and the* Company *of* Apothecaries; *for the want of which Union Mankind daily ſuffers Detriment.*]

I have not given a full account of thoſe Diſtempers *I have treated on, but only ſome ſhort hints concerning them ſo far as was neceſſary to clear my way as I went.*

I have in the following Eſſay *made Reflections upon the* Practice *of ſome particular Men only, my Deſign not being in the leaſt to reflect upon that* Noble Society *or* Body *of* Men, *or any* Member *of them, I mean the* College *of* Phyſicians, *whom I own to be the* Glory *of our* Nation, *and of the whole World, and for whom I have the greateſt Reverence and Reſpect imaginable.* [*And ſince*

I have had the Honour to be admitted into their number, and thereby of having more intimate converſe with them, I have more cauſe to eſteem and reſpect them every day.

I don't pretend to be the ſole Author, *or firſt* Broacher *of this* Doctrine *of* Acids *in the cure of* Diſtempers, *it having long ſince been the Opinion of ſome of the moſt happy* Practitioners *in the* World, *and is at this time imbraced by ſeveral of the greateſt Men, that perhaps our Age affords.*

I wrote this Eſſay *at a place (during the firſt three Weeks of the* Siege *of the* Caſtle *of* Namur, *in which time we had not many wounded* Men *brought to our* Field-Hoſpital*) where I had not the opportunity of conſulting* Books, *nor had I the benefit of coming at my own* Papers, *wherein I had from time to time ſet down my Obſervations upon this Subject: For want of which I have only made uſe of thoſe that occurred to my* Memory, *which is a very treacherous one, and ſo they are not ſo numerous nor exact as I deſigned them: But however, for ſome reaſons I am willing to venture them abroad as they are, they not being in the leaſt deſigned to entertain the* Learned, *but to undeceive the Multitude.*

I don't pretend to be ſo great a Man, nor to deſerve ſo well of Mankind as Helmont,

Paracelſus, &c. *have done; yet they treading out of the common Paths, and acting upon different* Principles *from the reſt of* Mankind, *they did not want thoſe who maligned and hated them, and uſed all the opprobrious* Language *in the World againſt them. Therefore why ſhould I, who don't in the leaſt pretend to have arrived to thoſe great* Perfections *that they had attained to, take it amiſs to be abuſed and evil ſpoken of?*

Authority has in great meaſure blinded ſome Mens Underſtandings, *and ſealed up their* Eyes: *There being ſtill a ſort of Men that pay too ſubmiſſive a* Deference *to antient Opinions, tho never ſo contrary to Reaſon, that they will not open their Eyes to ſee or underſtand the Truth. There are ſtill Men who write againſt moſt known Truths, as againſt the* Gravity *and* Elaſtick *Force of the* Air, *and other things of the ſame nature. This* Doctrine *of* Acids, *and that I formerly wrote concerning the* Cure *of* Wounds, *are likewiſe of the number of thoſe that are* unfortunate, *meerly for want of being born old, and with a* venerable Beard.

When a Book (ſays the famous Malbranch) *is firſt to appear in the World, one knows not whom to conſult to know its Deſtiny: The* Stars *preſide not over its* Nativity; *their* Influences

fluences *have no operation on it; and the moſt confident* Aſtrologers *dare not foretel the divers* Riſques *of* Fortune *it muſt run.* Truth *not being of this World,* Celeſtial Bodies *have no power over her; and whereas ſhe is of a moſt* ſpiritual Nature, *the ſeveral Poſitions or Combinations of Matter can contribute nothing either to her* Eſtabliſhment *or Ruin. Beſides, the Judgments of Men are ſo different in reſpect of the ſame things, that we can never more hazardouſly and imprudently play the* Prophet, *than in preſaging the happy or unfortunate Succeſs of a* Book. *So that every Man who ventures to be an* Author, *at the ſame time throws himſelf at the* Reader's *Mercy, to make him, or eſteem him what he pleaſes. But of all* Authors, *thoſe who encounter with* Prejudices, *ought moſt infallibly to reckon upon their Condemnation. Their Works ſit too uneaſy upon moſt Mens Minds, and if they eſcape the Paſſions of their Enemies (which I have not done) they are obliged to the* Almighty Force *of* Truth *for their Protection.*

However Time will do every Man Juſtice; and Truth *which at firſt appeared a* Chimerical *and* ridiculous Phantaſm, *by degrees grows ſenſible and manifeſt. Men open their Eyes and contemplate her, they diſcover her Charms, and fall in love with her.*

The Books *that encounter with Prejudices, leading to* Truths *through* unbeaten Paths, *require much longer time than others to obtain the Reputation their* Authors *expect them. And I find it but too true in my ſelf, that all thoſe Writers who combate with* Prejudices, *are much miſtaken, if they think by that means to recommemd themſelves to the Favour and Eſteem of others. Poſſibly ſome few will ſpeak honourably of them when they are dead. But whilſt living they muſt expect to be neglected (I ſpeak experimentally) by moſt people, and* deſpiſed, reviled, *and* perſecuted, *even by thoſe, who go for the wiſeſt and moſt moderate ſort of men.*

There is nothing but Truth contained in my Novum Lumen Chirurgicum; *and I did think that I ſhould have been put into a condition this Summer to have made it evidently appear. But inſtead of that, I have been abuſed and delivered up into the Hands of my Enemies, to do with me as they pleaſed.*

My Novum Lumen *is built upon a pair of* Medicines, *the which as yet I think not fit to make publick; but here lies my misfortune common to all thoſe who make new* Diſcoveries. *A great many believe the Truth of what I have ſaid, and that my* Medicines *are capable of performing what I have promiſed for them. But amongſt the number of thoſe, who are ſo*

ingenu-

ingenuous as to believe matter of Fact, a great many ſay, this Man was not the Author, *others that they have the ſame* Medicines, *and ſome that they imparted them to me. As for theſe* Gentlemen, *I can very eaſily excuſe them, I very well knowing that it is the Nature of moſt Men, not to allow any Perſon the honour of his own* Diſcoveries, *they thinking that thereby their own* Glory *is eclipſed. But there are another ſort of Men, whoſe Intereſt will not give them leave to embrace the* Truth, *and for the ſame reaſon they do what in them lies, to keep others from ſo doing. And the greateſt part of* Mankind *not being Judges in my Cauſe any further than their Eyes direct them, it is altogether impoſſible that there ſhould be any great number of* Spectators, *by which means I am evil ſpoken of by many, upon no other grounds, than becauſe an intereſted Party have told them, that I have pretended to what I can't perform.*

I expect the Mouths of my Enemies *will be opened very wide againſt me; but I have already born ſo much, that I can with a great deal of* Contentedneſs *bear with the greateſt Indignities that can be offered me: My great Satisfaction being, that I have Peace in my own* Breaſt, *having propoſed nothing but what tended to the good of* Mankind; *and very*

very well knowing, that if my Medicines *are faithfully and skilfully uſed, they are capable of performing much more than I have promiſed for them; but the beſt* Medicines *unskilfully uſed, or with a deſign they ſhould not ſucceed, by prejudiced Perſons, may be brought into diſgrace.*

The following Eſſay *I humbly offer to the candid Reader's ſerious Conſideration, nothing doubting but that it will meet with a favourable reception from ſome few. And I muſt needs ſay, that I more value the good Opinion and good Word of one* candidly ingenuous, *than all that can be ſaid againſt me by* ten thouſand clamorous, ill natur'd Perſons. *I have endeavoured to act and behave my ſelf ſo, as to deſerve no Man's ill* Word; *but if I am abuſed, and my Undertakings miſrepreſented without any juſt cauſe, I ſhall never break my Heart about it, I very well knowing that the Juſtice and Integrity of my* Undertakings *will one time or other be made appear.*

[*There being a very great Call for this little* Tract, *and the firſt* Impreſſion *being quite ſold off; at the requeſt of my* Bookſeller *I have ſuffered this* ſecond Edition *to come abroad: The Additions I have made to it are not many, tho I could have added much more; but the* Bookſeller *deſigning to print this and the* Appendix

pendix *together, if I ſhould have added much, it would have ſwelled to a larger Extent than is deſigned.*

Were I ſatisfied that any one thing that I have advanced either in this, or any of my other Tracts, had the leaſt tendence to do Mankind *Prejudice, the firſt thing that I went about ſhould be to write a* Recantation, *and to beg pardon of the* World: *but inſtead of that, I am every day more and more ſatisfied and confirmed in the Truth of my* Hypotheſis, *both by the Succeſs that attends my own Practice, as alſo the concurrent* Teſtimony *of* Multitudes *of* Practitioners *from moſt parts of* England, *who have been ſo generous, as to return me Thanks for making them ſenſible of their* Errors, *and ſetting them upon a right Bottom, whereby they are made capable of acting with ſome ſort of* Certainty, *which before they could not do: For the ſake of whom, tho I meet with never ſo much* Oppoſition *from others, I will ſpare no Pains to make things yet more clear.*]

From my Houſe in Villers ſtreet, York Buildings, in the *Strand.*

N B.

N B. The Reader is desired to take notice that where any Words or Sentences are within this Mark, [ ] it signifies an Addition to the first Edition; and that if there be any more Paragraphs than one added, there is likewise a blank Line before and after such Paragraphs for the better observation.

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A Physico-Medical ESSAY, &c.

CHAP. I.

Of the Small Pox.

THE first thing I shall begin with, is the Disuse of *Alkalies* in the *Small-Pox*, that fatal *Distemper* to *three Kingdoms*, and even all *Europe*: In that by the means of it *God* was pleased to deprive us of a *Princess*, whose Worth was such, that a Value sufficient can never be set upon it, nor whose Loss sufficiently be lamented.

It is a common Practice, both of *Nurses* and the generality of *Practitioners*, as soon as they perceive the least *Symptoms* of this *Distemper*, to give either *Gascoin*'s, *Countess* of *Kent*'s, *Lapis de Goa*, or some other *Testaceous Pouder*, which are known *Alkalies*. The one Party, as they pretend, to drive the *Malignity* from the Heart; the other to correct the *Acidity*, which they conjecture (for beyond conjecture they can't go) to be in the *Blood*.

In the ſubſequent *Diſcourſe*, I ſhall endeavour to ſhew upon what falſe Suppoſitions both Parties go.

For the firſt ſort, it will not be worth while to ſpend much time about them, by reaſon every one will readily grant, that they generally act upon wrong and miſtaken *Notions*. For, for any *Malignity* to be lodged in the *Heart* more than any other part, is altogether impoſſible, by reaſon that the *Blood* moves ten times, at leaſt, faſter through the *Heart* than any other part, the *Lungs* excepted: For the Cavities being large, no *Stagnation* is to be feared, and ſo by conſequence no danger. If there be any danger of the *Malignities* ſetling any where, it muſt be in thoſe parts where the *Veſſels* are very ſmall, and the *Blood* moves but ſlowly, which muſt be near the extream Parts.

For the *ſecond Sort*, who give the ſame *Medicines*, but with quite different Intentions; I ſhall endeavour to prove, that their Suppoſitions are altogether as falſe and groundleſs as the former. They give their *Alkalious Medicines* to correct the *Acidity* they ſuppoſe to be in the *Blood*, and which is, as they pretend, the occaſion of all the ill *Symptoms* that attend People in the *Small-Pox*: Now I could never hear of any one, that by *Analizing* the *Blood* of Perſons in the *Small-Pox*, could ever find the leaſt Footſteps of *Acidity* in it; tho, on the contrary, it doth appear after many Trials, that the *Blood* of ſuch Perſons doth more abound with *Alkalious Particles*, than that of ſound People: ſo by conſequence, the giving of *Alkalies* in this caſe muſt

muſt be at leaſt ſuperfluous, if not highly pernicious, as I have frequently obſerved, and ſhall inſtance in ſome Particulars.

The cauſe of the *Small-Pox*, common with moſt other *Fevers* and *acute Diſtempers*, I ſuppoſe to be, from a quantity of ſuch *Particles* being ſome way or other admitted into the *Blood*; which being of a quite different *Texture* from that of the *Blood*, and ſo not capable of being mixt with it, cauſes a hurry and diſorder there; which is what I * elſewhere obſerve, to be the occaſion of both *continued* and *Symptomatick Fevers*.

* *Nov. Lum. Chyr.*

Now it is well known that a *Feaver* always precedes the *Eruption* of the *Puſtles* in the *Small-Pox*: And when the *Puſtles* are well come out, that is, when the *Heterogeneous* or *Particles* of a different *Texture* from thoſe of the *Blood*, are thrown out to the Surface of the *Body*, then the *Fever* ceaſes.

Now to aſſiſt Nature in throwing thoſe *Heterogeneous* Particles out of the *Blood* to the extream Parts, which they pretend to be mightily hindred by a great quantity of *Acids* in the *Blood*, they give repeated and large quantities of *Teſtaceous*, *Alkalious Pouders*, and other *Diaphoreticks*: which indeed ſeldom fail of anſwering their Intentions, in throwing out large quantities of *Puſtles*, even more than *Nature* is able to ſupply or bring to *maturity*; and if ſhe chances to cope with 'em, 'tis the only occaſion of ſpoiling ſo many *Angelick Faces*, as we every day obſerve. But the ſpoiling of *Faces* is not all, for beſides the throwing out of ſo great a quantity

of *Puſtles*, by breaking the *Globules* of the *Blood*, when it is brought to the *Cutaneous Glands*, inſtead of thoſe *Glands* ſeparating the *Excrementitious Serum*, which in a State of Health, is all or moſt part of it to be carried off by *Sweat*, or *inſenſible Tranſpiration*, but at this time to ſupply the *Puſtles* till they are brought to maturity: I ſay, by breaking the *Globules* of the *Blood* when it is in its confuſed State, *Serum* and all together; the *Excrementitious Serum* only, according to the Rules of *Nature*, ought to be ſeparated, thoſe *Glands* being ſo many *Strainers* adapted to receive into them the *Serum* only, and not the leaſt drop of *Blood* when it is in its natural State, and its *Globules* unbroken. I can liken the ſeparation of the *Serum* from the *Blood*, by the mediation of the *cutaneous Glands*, to nothing better than to a Mixture of *Oil* and *Water*, made by continued agitation, when that *compound Mixture* ſeems to be one intire white *Liquor*; tho with good *Eyes* or a good *Glaſs*, the *Oil* may be ſeen floating in the *Water* in ſmall *Globules*, as the *Blood* doth in the *Serum*, as I elſewhere * obſerve: Yet this Mixture of *Oil* and *Water*, let it be done never ſo exactly, if it be poured into a *Funnel* lined with *brown Paper*, wet before-hand, the *Pores* will be ſo diſpoſed, as to let all the *Water* run through, tho not the leaſt *Particle* of the *Oil*; yet if there be ſome *Alkalious Salts* boiled with this Mixture of *Oil* and *Water*, the *Globules* of the *Oil* will be ſo broken, as to paſs readily with the *Water* through the fore-mentioned brown Paper, which before it would

* *Nov. Lum. Chyr.*

would not in the leaſt do. In like manner, the *Globules* of the *Blood* being broken, by the means of *Alkalious Medicines*, together with too great a quantity of *Alkalious Particles* being before admitted into it, is by that means made capable of being received into the *Cutaneous Glands*, which is the only occaſion of thoſe *purple Spots* upon the Surface of the *Skin*, not only in the *Small-Pox*, but other *Fevers*; which Spots ſeldom or never fail of being the certain *Prognoſticators* of future *Death*.

But this is not all, for by the foreſaid breaking of the *Globules* of the *Blood* by *Alkalious Medicines*, theſe ſmall broken *Globules* getting into the ſmall *Meanders* of the *Brain*, hinder the *Motion* of the Animal Spirits through the *Nerves*, and ſo cauſe *Deliriums*, and all thoſe fatal Diſorders of the *Brain* that are but too frequently ſeen.

Likewiſe the *Blood* not being capable of being contained in its proper *Channels*, is the occaſion of violent *Bleeding* at the *Noſe*, *bloody Urine*, &c. which are none of the beſt *Symptoms*, but what too frequently happen by the aforeſaid means.

Beſides breaking of the *Globules* of the *Blood*, and cauſing the ill *Symptoms* before-mentioned, with many others I don't think fit here to enumerate; by their *Diaphoretick* Quality, there is ſo vaſt a waſte made of the *Serum* of the *Blood*, that there is not a ſufficient quantity left to ſupply and bring to maturity thoſe many *Puſtles* (even more than Nature deſigned) that thoſe *Medicines* alone had thrown out: So that about the *ninth*, *eleventh*, or *thirteenth* day, for want

of a ſufficient quantity of *Serum* to ſupply them, the *Puſtles* fall, and the *Acrid, corroſive Matter*, being abſorbed into the *Blood*, cauſes *ſecondary Fevers*, which oftentimes prove of very dangerous Conſequence. I might expatiate a great deal more, but I deſign brevity.

It may be ſaid, you have gone far enough in condemning the ordinary *Practice* as to the uſe of *Alkalies* and *Diaphoreticks*, not having ſubſtituted a better and ſafer *Method* and *Medicines* in their room: but not too faſt, that follows in its proper place.

The *Small-Pox* is a *Diſtemper* that requires the giving of as few *Medicines*, as in any *Diſtemper* whatſoever, unleſs in ſome extraordinary Caſes: but yet I think it the moſt unreaſonable thing in the World, that People (as is the common practice in this caſe) ſhould be left to the ſole management of *old Women* and *Nurſes*; which thing alone I verily believe has been the deſtruction of more People, than the *Sword* it ſelf. And altho but very few Medicines, as I ſaid before, are generally neceſſary, yet the Eye of a careful, skilful *Phyſician*, and that from the beginning, is as convenient as in any *Diſtemper* whatſoever; that he ſeeing Nature's Operations, may alſo ſee the fit time when to give the *Medicines* requiſite. I confeſs I have heard ſome People complain that ſuch a *Phyſician* has had ſo many *Fees*, and never wrote one Bill for them: For ſuch People, let me tell them, that they complain without cauſe; for in many caſes, eſpecially in this, the *Phyſician* deſerves his Fees better for not writing at all, than for ſo doing.

I own my ſelf to be a profeſt *Chymiſt*, and in many things, tho not all, a *Diſciple* of *Helmont*, and know nothing in this World ſo delightful to me, as *Chymical* Operations: Yet in this caſe, nor indeed in ſcarce any *acute Diſtemper*, do I judg *Chymical Medicines* [at leaſt the elaborate ones] to be abſolutely neceſſary, tho many of them may do well, and are ſometimes to be uſed: But I don't know any reaſon we have to fly to *elaborate Preparations*, when Nature has provided *Medicines* ready to our hands. *Acids* are the things skilfully and timely given, which I have ſeen, not only by my own, but by other Great Mens Practice, to be the only ſafe, effectual, and ſeldom or never-erring *Medicines* in this *Diſtemper*, ſo that they are rightly timed, and given with diſcretion: and why ſhould we fly to *Acids Chymically* prepared, when, as I ſaid before, Nature has provided to our hands *Oranges*, *Limons*, *Citrons*, *Limes*, and a great many more not here neceſſary to mention, which for the moſt part anſwer our intentions, ſo that they are skilfully given by an experienced hand? And as, I hope, I have given ſufficient Reaſons to diſſwade the uſe of *Alkalies* and *Diaphoreticks*, from the many direful effects that daily attend their uſe; ſo I hope to give as cogent ones to enforce the uſe of *Acids*, from the laudable, good effects I have ſeen from them: for in *five hundred* (at leaſt) Patients, that I have had of all *Qualities* to do with in this *Diſtemper*, in *Worceſter* and *London*, where I have been called in at the beginning of the Diſtemper, I do not know that I have had one that has died, or been diſfi-

gured; nay ſome that have been brought into very ill circumſtances by the precedent uſe of *Teſtacius*, *Alkalious Powders* and *Diaphoreticks*, I have retrieved from the jaws of *impending Death* by the uſe of fit and proper *Acids*.

It may be wondred at by ſome, that I make a difference between *Teſtaceous Pouders* and *Diaphoreticks*, when the *Teſtaceous Pouders*, eſpecially the compound ones, as *Gaſcoin*'s *Pouder*, *Counteſs* of *Kent*'s, *Lapis de Goa*, &c. are accounted *Diaphoreticks*, and indeed are ſo: but the reaſon why I do it, is, becauſe for the moſt part, beſides the ſaid *Alkalious Pouders*, other more forcible *Diaphoreticks* are alſo given.

I having in ſhort given ſome hints concerning the cauſe of the *Small Pox*, I need not again repeat them; ſo I ſhall immediately proceed to the method I take in the cure of it, which, being according to *Nature's* dictates, is ſhort and eaſy: For *Nature* in performing her Operations, makes ſhort and eaſy cuts, it being in the cure of *Diſeaſes*, as in finding out and giving an account of the *Phenomena* of *Nature* by *Philoſophical Diſquiſitions*; they that go upon the feweſt *Principles*, generally diſcover moſt of her Secrets, and are capable of giving the beſt and moſt rational account of them; whereas they that are clogged with multiplicity of *Principles*, and wandring in tedious, long, and uncouth Paths, thinking thereby to get admiſſion into *Nature's Cabinet*, after they have ſpent much time, and taken a great deal of pains, at laſt ſit down as wiſe as when they began, and not one jot the wiſer.

Firſt of all, when I come to a Patient who has the *Symptoms* of the *Small-Pox* upon him, which are ſo well known even to Nurſes, that I need not ſpend any time about them: In the firſt place, if there be any manifeſt ſigns of the *Stomach's* being oppreſſed and clogged with *viſcous Matter*, as generally it is, I firſt of all give a gentle, eaſy *Vomit*, ſutable to the age and conſtitution of the Patient; and after that hath done operating, ſome *Syrupus E Meconio*, or any other proper *Opiat* in due proportion. Afterwards, to allay the hurry and diſorder in the *Blood*, occaſioned by the intromiſſion of *Heterogeneous Particles*, which *Nature* is endeavouring to throw out; and to confirm the *Texture* of the *Blood*, ſo as to enable it to rid it ſelf of its enemy, I give large quantities of any of the following Juleps.

℞ *Succi Aurantior. Unc. ſex,*
Aq. Hordei lib. duas,
Sacchari Albi q. ſ. ad
gratam Saporem. M.
f. Julap. Vel

℞ *Succi Limon. Unc. quatuor,*
Aq. Hordei ℔ *duas,*
Cinnamomi Fortis Unc. ſemis
Syr. E Rubo Idæo Unc. tres.
M. f. Julap.
Vel

℞ *Aq. Cinnamomi Hord.* ℔ ii.
Succi Limon. Unc. quatuor,
Syrup. de Succo Lujulæ Unc. tres.
M. f. Julap.

Of any of theſe *Juleps*, I give my Patients to drink as oft and as freely as they pleaſe: Drinking likewiſe *ſmall Beer* with *Juice* of *Oranges* in it, in as large quantities as they pleaſe: But during the whole courſe of the *Diſtemper*, all ſorts of *Fleſh* ought to be avoided.

To *poor people*, inſtead of the aforeſaid *Juleps*, and to ſave charges, I order them large quantities of *ſmall Beer*, acidulated with *Oil of Vitriol*, or inſtead of that *Vinegar*, or *Verjuice Poſſet-drink*, to be drank frequently, and in large quantities.

But if in the beginning, or at any other time, I find the *Brain* very much diſturbed, and the Patient *delirious*, for the moſt part I find it abſolutely neceſſary to let Blood, and that in a good quantity; and then to fly to the uſe of more *powerful Acids*, giving the following *Juleps* in large quantities, which preſently calm the violent *Motion* and *Agitation* of the *Blood* and Spirits, and ſet all to rights in a ſmall time.

℞ *Aq. Cinnamomi Hord.* ℔ *unam*
Syrup. de Rubo Idæo Unc. unum Sem.
Sp. Vitrioli Volat. Drach. Sem.
M. f. Julap. Vel

℞

℞ *Aq. Cinnamomi Hord.* ℔ *unam,*
Syr. de Rubo Idæo Unc. unam. Sem.
Gaſ. Sulphuris q. ſ. ad
acidum Saporem. M. f.
Julap. Vel

℞ *Aq. Hordei* ℔ *duas,*
Epidem. Unc. duas
Syr. Lujulæ Unc. tres,
Sp. Nitri, vel Vitrioli Dul.
Scrupulos duos. M. f.
Julap. Vel

℞ *Flor. Roſarum Rub. Drac. ſex,*
Aq. Fontan. Bullientis ℔ *duas,*
ſtent in infuſione in Vaſe vitreo clauſo per quadrantem horæ, poſtea affunde Ol. Vitrioli vel Sulphuris per Campan. Scrupulos duos: macerantur per alterum quadrantem horæ, et coletur, colaturæ claræ; adde Saccbari albiſſimi q. ſ. ad gratam ſaporem.

[In all the *Liquor* that they drink, I order them a few drops of *Spiritus Nitri*, or *Oleum Vitrioli Dul.*]

If at any time I find my Patient's Spirits languid and low, I then give three or four ſpoonfuls of the following *Cordial* at due intervals; [eſpecially towards the latter end of the Diſtemper, being the time when Cordials are moſt wanted.]

℞ *Aq. Mirabilis*
Epidem. ana Unc. tres

Spirit.

Spirit. Citri Unc. ſem.
Aq. Melliſſæ Unc. octo
Syr. Garrioph. Unc. unam ſem.
M. f. Julap. Cardiacum.

By this *Method* I have brought my Patients through the *Diſtemper*, without ſo much (almoſt) as the leaſt uneaſineſs, or even confining themſelves to their *Beds*, and without the leaſt fear of a *ſecondary Fever*, which is that which frequently proves of moſt fatal conſequence.

After the *Puſtles* are quite gone, I then take care to *purge* them well for five or ſix times with gentle and eaſy *Purges*, after each *Purge* giving an *Hypnottick*. After that I have done *Purging*, for ſome time I give *corroborating*, *ſtrengthning Medicines*, to confirm the *Texture* of the *Blood* and *Juices*, and bring them to their natural State, by which means I prevent ill accidents, that ſometimes ſucceed the *Small-Pox*.

I have not given a full *Hiſtory* of this *Diſtemper*, that being contrary to my deſign, but endeavoured to deter people from the uſe of thoſe *Methods* and *Medicines* that have proved fatal to ſo many, and to advance a better and ſafer *Method* and *Medicines* in their room; yet I would not have people wholly to rely upon the *Method* I have here ſet down, but always have a *Phyſician* by, to obviate any unuſual *Symptoms* that may chance to appear contrary to what generally do; and where Life lies at ſtake, people can't be too cautious: But if the good *old Woman* and *Nurſes*, in ſpight of all that can be ſaid, will be ſtill tampering, I muſt needs ſay this, that if my

Method

Method were exactly followed by every body from the beginning without any variation, I verily believe that there would not one in ten die that have formerly done by the uſe of *Alkalies* and *Diaphoreticks.*

As I have before endeavoured to explode the uſe of *Alkalies*, and to give my Reaſons for ſo doing; ſo I ſhall now endeavour to give ſome Reaſons for the *Method* I take with the great uſe of *Acids* in this caſe.

As I have before obſerved, I judg the cauſe of the *Small-Pox* to be from an intromiſſion of *Heterogeneous*, or *Particles* of a different *Nature* and *Texture* from the *Blood*, into it; by the means of which *Particles* the *Blood* is put into a very great hurry and diſorder, in order to throw off its enemy; and that the place that Nature deſigns the diſcharge of theſe *Particles* by, is the *cutaneous Glands.* Now the Inconveniences that I obſerved to attend the uſe of *Alkalies*, were the throwing out of more *Puſtles* than Nature deſigned, the deſtroying of the *Globules* of the Blood, and a waſte of too great a quantity of *Serum.* I had before forgotten to mention one diſmal effect of *Alkalies* and *Diaphoreticks*, and that is, that by deſtroying or breaking the *Globules* of the *Blood*, inſtead of *regular Puſtles* being thrown out to the Surface of the Skin, the divided broken *Globules* are together with the *morbifick matter* thrown out, as in the caſe of—— and ſo cauſes an *Eriſipelas* or St. *Anthony*'s Fire, which ſeldom or never fails of proving fatal.

Now I almoſt defy any one to ſay that he ever obſerved ſuch *Symptoms* as theſe, if *Acids* were from

from the beginning uſed: For *Acids* are of that nature, that they confirm the *Texture* of the *Blood*, which is that red ſubſtance wherein is contained the *Byolyenium* * or *Lamp* of *Life*; and by ſo doing Nature is capable of throwing out the *extraneous Particles*, in a way ſutable to it, and without the inconveniences that attend the other Method: For the *Texture* of the *Blood* being confirmed, and moving regularly and naturally in its proper Channels, the *morbifick Particles* are only thrown out, and ſuch a quantity of *Serum* left, as is ſufficient to ſupply the *Puſtles*, and bring them to maturity without any danger of their flatning, and the *acrid Matter* being again abſorbed into the Blood, and cauſing *ſecondary Fevers*. Beſides, the *Globules* of the Blood being kept together unbroken, there is not any danger of their being extravaſated, and cauſing thoſe fatal *purple Spots*; nor of being thrown out together with morbifick Matter, and ſo cauſing an *Eriſipelas* or St. *Anthony*'s Fire; neither are *Hemoragies* at the *Noſe*, *bloody Water*, &c. in the leaſt to be feared, nor by being admitted into the ſmall *Meanders* of the *Brain* to cauſe *Deliriums*, and thoſe other *Symptoms* that attend it.

* *Nov. Lum. Chyr.*

I might expatiate upon continued *Fevers*, and ſome other *acute Diſtempers*; but that would be to be guilty of *Tautology*: For I aſſign but one general Cauſe of them, tho I own that the *extraneous Particles* cauſing 'em may be ſomewhat different, and according to the different ſize of the *extraneous Particles*, the parts affected may be different;

as

as in the *Small-Pox*, the ſize of the *Particles* are ſuch as to fit them to be thrown out by the *cutaneous Glands* to the ſurface of the Skin; in other *Fevers* they are thrown out, ſometimes one way, ſometimes another, according to their ſize. For inſtance, ſometimes they are thrown out by *critical Sweating*, ſometimes by *Urine*, ſometimes by the *Glands* of the *Mouth* in *ſpitting*, and ſo on, according to the different diſpoſition of the Particles cauſing the Diſtemper, being fitted to be diſcharged thrô the Pores of different Parts: and which ever way we find Nature enclined to do her work, we muſt aſſiſt her in it, but not ſpur her on, unleſs ſhe be too ſluggiſh, but muſt not, upon any account whatſoever, hinder or thwart her in her Operations.

In moſt *continued Fevers* I have found *Alkalies* equally pernicious as in the *Small-Pox*, and *Acids* equally advantagious; the which I ſhall inſtance in one or two particulars.

After I came out of *Flanders* laſt year, being 1694. having diſcourſed with a certain *Phyſician* about a *Fever* that had that Summer raged in *London*, and of which many died; he told me, that when he found his *Patients* under ſuch and ſuch Circumſtances, he as much gave them up for dead, as if a *Dagger* were run through their *Hearts*: I asked him what thoſe *Symptoms* were, that rendred his *Patients* circumſtances to be ſo very dangerous? He replied, When he found them *delirious*, and had *Spaſms* and *Convulſions* of the *Nerves*. I enquired of him, what *Medicines* he gave? He told me, a Compoſition of *Gaſcoin*'s *Pouder*, *Virginian*

ginian *Snake-Root*, &c. which was what he ſolely relied on, and which is the ſame, or of the ſame nature with what is generally given in thoſe caſes. I asked him whether he had never found his Medicine ſerviceable to him? He ingenuouſly confeſſed, that when his Patients were under the aforeſaid Circumſtances, it never did him any ſervice at all. I again asked him, why he did not vary his Method? His Reply was, his Medicine was a moſt noble *Alkaly* and *Alexipharmick*, and what was generally uſed, and therefore he did not think fit to vary from an eſtabliſhed Method.

A few days after, I was called in to a *Gentlewoman* exactly under the ſame Circumſtances before related, ſhe being *delirious* to the higheſt degree, had violent *Spaſms* and *Convulſions* of the *Nerves*, and all other *Symptoms* of a *Malignant Fever*. I did not deſpair of her Life, and by the plentiful uſe of *proper Acids*, all *Symptoms* ſoon vaniſhed, and in a week's time ſhe was fit to go abroad.

Beſides this I could inſtance in a hundred Caſes of the ſame nature, but I deſign brevity.

I muſt own that other *Diſtempers* may be complicated with the *Small-Pox*, and other *continued Fevers* and *acute Diſtempers*; or from a different Conſtitution of the *Air*, *&c.* unuſual *Symptoms* may appear; in which caſes a general *Method* muſt not be relied on, but recourſe muſt be alſo had to proper *Specificks*.

[I have ſo little reaſon to recant what I have ſaid concerning the Cure of the *Small-Pox* and *Fevers* by the means of *Acids*, that every day's experience

experience confirms me more and more in the truth of it; and were it not that I design a particular *Tract* of *Fevers*, I could expatiate here very largely concerning the reasonableness of my Proceedings.]

CHAP. II.

Of the Scurvy.

I Am now come to treat upon the disuse of *Alkalies* in the *Scurvy*, that reigning *Distemper*, which few people are altogether free from, and is by most men accounted incurable, or at least, it for the most part proves so.

But here I expect the cry of all *Mankind* against me; What! say there is no *Acidity* in the *Blood* in the *Scurvy?* What is it but an *Acidity* in the *Blood* that is the occasion of the breaking out of *Scabs*, *Pimples*, *Blotches*, &c. upon the *Skin?* What, but a *Sharpness* and *Acidity* in the Blood, occasions those *wandring Pains*, and a thousand other *Symptoms* that people labouring under this *Distemper* complain of?

My Friends, have a little patience, and I will presently make it appear to you, that those *Symptoms* are not occasioned by *Acids*, but from *Acrid*, *Lixivious*, *Alkalious Particles*, which I doubt not to evince by plain matter of fact.

First of all, by a *Chymical Analysis*, it doth appear, that the *Blood* of *Scorbutick Persons* hath by much a greater quantity of *Volatile*, *Alkalious*

Particles, than that of ſound Perſons; beſides which, ſome quantity more or leſs of a *Lixivious, fixt Alkaly*, which, for as much as ever I could find, the *Blood* of *ſound Perſons* is altogether deſtitute of.

And by the way give me leave to add this. It is my opinion, that if *Phyſicians* would give themſelves the trouble of *Chymically Analyzing* the *Blood* of Perſons in all *Diſtempers*, and making nice Obſervations of the different ſubſtances to be obtained from it: By that means the *cauſe* of *Diſtempers* would be certainly known, and by conſequence the cure of them much more certain than now it is. But that I may return to my buſineſs.

Another conſiderable Argument, beſides that beforementioned, to prove that the *Scurvy* hath its riſe from *Alkalious Subſtances* in the *Blood*, and not from *Acids*, is this which follows.

I have been frequently told by ſome *Seamen* and *Surgeons*, that have been *long Voyages* at *Sea*, eſpecially towards *China* and the *Indies*, that of a *hundred Men* that have been in a *Ship*, not two of them but have been almoſt eaten up with the *Scurvy*, their *Skin ſqualid* and full of *Blotches*, their *Gums* eaten away, and their *Teeth* ready to drop out, *Pains* and *Aches* all over their Bodſes, *&c.* and yet upon their landing at *Cadiz*, or thereabouts, where are plenty of *Oranges* and *Limons*; upon eating large quantities of them, in one fortnight's time at fartheſt, ſcarce one hath failed of being perfectly cured. This is not a bare Relation of one or two Perſons only, but what is generally agreed upon, and allowed by all people. Alth

Altho these *moderate Acids* plentifully used, may have such effects in that hot Country, yet I have not observed that in our cold Climate they have always, always I say, the same *effect*: because in slight cases they generally do very well; yet in more stubborn ones we are forced to have recourse to more powerful penetrating ones.

As for *Alkalies*, I don't believe that ever any one was cured by them of this *Distemper*; altho I have known some people that have taken a vast *Farrago* of *Testaceous Powders*, *&c.* without any good effect at all, which afterwards has been done in a small time, with a small quantity of proper *Acids*.

Before I conclude, I shall insert a *Preparation* of *Antimony*, the which I have found of extraordinary use in the most inveterate *Scurvies*.

Tinctura Antimonii.

℞ *Flor. Albor. Antimonii Unc. octo,*
Spiritus Tartari volatilis ℔ *duas,*
ponantur in Phiolâ vitreâ forti cum Collo oblongo; simul misceantur, & optimè agitantur; postea digerantur leni Calore Balnei per dies quatuordecem, tunc decanta Spiritum rubro colore tinctum a Floribus. Spiritus verò tinctus, e Cucurbitâ vitreâ per Alembicum abstrahendus a Tincturâ, usq; ad medietatem cum igne leniſſimo; Tinctura remanens, reservetur in Phiolâ cum obturatorio vitreo, optimè clausâ. Spiritus, distillatione abstractus, potest iterum usurpari in eodem negotio.

Spiritus Tartari volatilis Præparatio.

℞ *Tartari Rhenani purissimi* ℔ *viginti, collocâ in Cucurbitâ ferreâ, cui adaptatur Alembicum aut ferreum aut cupreum; collo Alembici potest applicari Serpens stanneus aut cupreus, collocatus in Dolio aquâ frigidâ repleto: Junctura ubivis locorum ritè rectèq; sint munitæ cum optimo Luto; quando Lutum optimè siccatur, tunc distilla, primò igne lento, postea fortissimo, & continuatur donec nihil amplius elici potest. Spiritus prædictus, ab oleo fœtido liberatus, potest misceri cum libris tribus Capitis Mortui ad albedinem calcinati, & ad medietatem usque, in Balneo Mariæ abstrahere è Cucurbitâ vitreâ per alembicum, quorum junctura sint ritè munitæ, & suum retinebit calcinatus Tartarus Fetorem una cum Phlegmate stillante Spiritus parte solummodo puriore & subtiliore; qui denique cum* ℔ *duabus Capitis Mortui calcinati miscendus, & per Alembicum recentem rectificandus. Atque hic est Spiritus ille Tartari, cum quo prædicta extrahitur Tinctura, & quidem non solum hæc sed etiam cunctorum Metallorum aliorum id quod nullus præstare potest alius.*

Of the aforesaid *Tincture*, I use to give about *four*, *six*, *eight* or *ten Drops*, according to the age and strength of my *Patients*, *Morning and Evening* in about half a pint of strong *Infusion* or *Decoct*

on of *Juniper Berries*, without any precedent *Purgation*; this Medicine performing that office where there is occaſion; it anſwering every thing that is generally ſaid of a true *Panacea*; ſometimes working by *Vomit*, ſometimes by *Stool*, and ſometimes by *Urine*, but moſtly by a gentle *Diaphoreſis* or *Sweating*: And I have once known it to cauſe a *Salivation*, without any of the *ill Symptoms* that uſually attend it, when raiſed by *Mercurial Medicines*. Whoever hath a mind to ſee more of this Tincture, may read *Glauber Op. Mineral. Par. Prim.* from whom I had it, tho I have ſomething varied from him. I have found it of great uſe, not only in the *Scurvy*, but many other *Chronical Diſtempers*, as *Rheumatiſms*, *Sciaticas*, *Dropſies*, &c. and by ſome few Obſervations that I have made, I believe it may do great things, even in the *Gout* it ſelf.

[That I may excite People to the uſe of this *noble Medicine*, I ſhall preſume to tranſcribe what *Glauber* has ſaid of it, and I believe he has ſaid no more than it deſerves.

This *noble Tincture* of *Antimony* (ſays *Glauber*) above all other *Medicines*, doth wonderfully evacuate all *vitious Humours*, and inſenſibly purify the *impure Blood*; it opens all *Obſtructions* of the *Liver*, *Spleen*, *Kidneys*, and all the other *Viſcera* of a *humane Body*, drawing from them all *Malignity*, leaving no Impurities there. And becauſe it purifies the *Blood*, it cures the *Leproſy*, the *French Pox*, the *Scurvy*, and all other *Diſeaſes* proceeding from the *Impurity* of the *Blood*. By its penetrative and attenuating Vir-

tue it resolves all *Tartarous Humours*, and evacuates those that generate the *Gout*, and the *Stone* in the *Kidneys* and *Bladder*. But it doth not dissolve *Tartar* perfectly *coagulated*, but only mitigates the pain proceeding from it, and hinders its increase; to wit, attracting and evacuating from all the *Viscera* both radically and fundamentally that which is not perfectly *indurated* and *coagulated*. It takes away all *Fevers*, and other *Distempers* proceeding from a superfluity of Humours. It sweetly evacuates Water contained between the Skin both by *Urine* and *Stool*. In short, it strengthneth and purgeth the *principal Parts*, and preserves them from all *preternatural Accidents*. It is the best *Preservative* in time of the *Plague*, and all other *contagious Distempers*; and to those that are taken with any of them, a most excellent *curative Remedy*, driving out and evacuating the Malignity. In a few words, it is a *universal* and even the *best* of all *Medicines*, being most profitable both for *Young* and *Old*, as it is also the most safe; but yet with caution to be administred, by reason of the most *potent Qualities* with which it is endowed, it being as it were a *greater Fire* extinguishing or swallowing up a *lesser*. A better *Medicine* than this certainly cannot be desired, which is gotten out of a mean Subject in a short time, and with very little charge. I ingenuously confess, that I have never seen the like, and I doubt not but that it is one of the *best* of *Medicines*. Thus far *Glauber* himself with a great deal more worth any Man's reading, *Vid. Op. Mineral. pars prima*, p. 35, 36, *&c.*

In *Scorbutes* attended with *Pains*, I have frequently known the following Tincture of admirable uſe, as I have alſo done in ſome ſorts of *Gouts*, in my Tract of which Diſtemper I have made mention of it.

℞ *Gum. Guaiaci pul. unc. duas*
Succi Liquiritiæ Hiſpan. in ten. talcolas inciſ. unc. quatuor
Sp. Vini Rect. lib. unam
Infunde clauſè & calidè per duos dies, poſtea decantetur Tinct. clara.

The Doſe of this Tincture is a Spoonful Morning and Evening, either in a Glaſs of warm Ale, or the following Infuſion.

℞ *Rad. Eringii unc. unam*
Lig. Saſſafras Dracm. ſex
Vini Rhenani lib. unam
Aq. Font. lib. unam ſem.
Infunde clauſè & calidè per horas quatuor & coletur, colatura reſervetur ad uſum.

In *Scorbutical Caſes* I have alſo found *Cremor Tartar* and *Tartarum Vitriolatum*, taken for a conſiderable time, to be of extraordinary uſe. And I heartily believe that if *Cremor Tartar* alone were given in large Quantities to our *Seamen* who go *long Voyages*, it would in a great meaſure, if not altogether, prevent the many Inconveniencies that attend them, by their *Scorbutick Habits*, which frequently afflict them to ſuch a degree, that they are thereby made

altogether uncapable of doing their Buſineſs. Nay I verily believe it would alſo prevent *Calentures*, and thoſe other *fatal Diſtempers* that deſtroy ſo many of our Men, in either long *Eaſt* or *Weſt India Voyages*; and by its cheapneſs it ſeems rather to be adapted for the Neceſſities of the *Poor*, than of the *Rich*. But altho it be a *cheap Remedy*, yet if we do but conſider the *Nobleneſs* of its *Extract*, that alone is ſufficient to ſet a Value upon it: What is it but the *Eſſential Salt* of the moſt *noble* of all *vegetable Productions*, viz. the *Juice* of the *Grape*, which is that which rejoices the *Heart* of *Man*, and makes the *Peaſant* equal with his *Lord*, and the *afflicted Man* forget his *Miſery*? For my own part I had rather be without a great part of the *Materia Medica*, than *Cremor Tartar*; for conſidering it as a *ſimple Remedy*, it is a thing of the moſt *Univerſal Extent* of any thing I know. Without doubt it is the *fineſt Purge* in nature, given in a due quantity, it performing that Office without any *griping* or uneaſineſs; and in a leſs quantity is a moſt *noble Alterative*, it ſtrengthning the *Stomach*, and helping *Digeſtion*. It allays all *violent* and *unnatural Fermentations* of the Blood; it is a noble *Diuretick*: to be ſhort, I query whether there be any one natural Production now known or in uſe, that in all reſpects is ſo adapted to do Mankind ſervice as this *Medicine* is.

I confeſs it is a *Medicine* that has for many *Ages* been in uſe; but how has it been uſed? it has only been trifled with, having been given by *Grains* and *Scruples*, whereas it ought to be

given

given by *Drams*, and even *Ounces* upon occaſion; and unleſs it were *Angelus Sala*, I don't remember that I have ever met with any one that has preſcrib'd it in large quantities beſides my ſelf; and I confeſs I was firſt excited ſo to do by what *Angelus Sala* has ſaid concerning the cure of himſelf when he labour'd under a moſt dreadful *Colick* which had like to have coſt him his Life, from which he was preſently deliver'd, by taking (as I remember) ſix Drams of *Cremor Tartar*. The like Effect I have frequently ſeen of it in the moſt *violent Colicks* imaginable, either given in a large Quantity at once, or elſe two Drams at a time, repeated every two, three or four hours, according to the *Urgency* of the *Caſe*.

Helmont ſomewhere ſays that every *Poiſon* carries along with it its own *Antidote*; and altho *Wine* drank in moderate quantities be one of the moſt *noble Cordials* in nature, yet the drinking of too large quantities of it, cauſes as many Inconveniencies as any one thing: nay I believe there are more *Chronical Diſeaſes* occaſioned by drinking of *Wine* and *Vinous Liquors* to exceſs, than from any thing elſe. Now I do not believe that there is any one thing that is ſo adapted to prevent the Inconveniencies that attend *hard Drinking*, as *Cremor Tartar* is, which is nothing but the Product of *Wine* it ſelf. Nay, it is not only good to prevent the Inconveniencies of hard Drinking, but for the moſt part to carry off the *Diſeaſes* already formed, that are cauſed by it.

It would take up too much room to ſay all that might be ſaid of this *noble Medicine*, and

I must beg the Reader's Pardon for this Digreſſion in ſaying ſo much as I have.]

Before I conclude, I ſhall mention one *Objection* more againſt my Opinion, made to me by ſeveral, and that is, That a more than ordinary *Saltneſs* is to be perceived in the *Blood* of *Scorbutick Perſons*, and this *Saltneſs* they take to be an *Acidity*. But if they would but enquire a little narrowly into the matter, inſtead of finding it to be an *Acid Saltneſs*, on the contrary they will find it to be a *Lixivious*, *Alkalious one*.

CHAP. III.

Of the Gout.

I Shall here make only ſome few *Obſervations* concerning the *Gout*, it being *Couſin German* to that of the *Scurvy*: and by what I have ſeen of it, I am fully convinced, that it is not from *Acids*, as is generally ſaid, that this *troubleſome Diſtemper* is occaſioned.

I have obſerved conſiderable large *Nodes*, in which are ſometimes contained a *hard chalky Subſtance*, and of which I have ſeen large quantities extracted, which by many *Experiments* I have found to be as much an *Alkaly* as either *Crabs Eyes*, *Coral*, *Pearls*, *&c.* the which I ſuppoſe no man will deny.

Now it being granted, that the matter contained in the aforeſaid *Nodes* is an *Alkaly*, how

how is it possible for this *Distemper* to proceed from *Acids*, when in those very parts where the *Distemper* most violently rages, there should be produced such large quantities of an *Alkalious Substance*? For if the *Distemper* proceeds from *Acids*, as 'tis generally agreed upon, the *Patient* need not clog his *Stomach* with *Alkalies*, as is generally practised, there being a *Remedy* already placed in the Part affected: And I verily believe, that the only reason why this *Distemper* has been accounted amongst the *Opprobria Medicorum*, has been from the *mistaken Notions* they have had concerning it.

But if Men will still persist to assert, that this *Distemper* proceeds from *Acids*, and at the same time own the *chalky Substance* before-mentioned, which is only the *Morbifick Matter* indurated, to be an *Alkaly*, they must tacitly believe the *Doctrine* of *Transmutation*, tho openly they are ashamed to own it, and will laugh at and ridicule those that do.

But this is not all; for suppose the *Acid Matter* causing this *Distemper* to be transmuted into a *chalky*, *alkalious Substance*, the *Distemper* must never more pretend to come in or near the part where this Substance is lodged, it being placed as a Centry to guard it off: Nay, the *Blood* at times must all, or at least great part of it, pass through the *Part* or *Parts*, where this *chalky Substance* is lodged, by which means a Man would think it should be sufficiently guarded from any more growing *Acid*; and so by consequence, when the *chalky Nodes* are once settled, people have not the least reason for the future

to

to be in fear of the return of their *Diſtemper*; the contrary of which a great many *honeſt Gentlemen* to their ſorrows experience. So that a Man would think, that theſe very *Nodes* alone were ſufficient, if there were no other reaſons to be given for it, to ſatisfy any Man who is maſter of his Reaſon, that *Acids* are not, and that *Alkalies* are the *cauſe* of this *Diſtemper*. And if the *Blood* abound with too great a quantity of *Alkalious Particles*, the giving of *Alkalies* muſt be prepoſterous, it being to add *Fuel* to the *Flame*, which inſtead of quenching or extinguiſhing, makes it ſo much the greater.

It may not be amiſs to take notice, that few people are troubled with the *Gout*, but thoſe who drink large quantities of *Wine* or ſome other *generous Liquors*, abounding with *vinous Spirits*; ſo that the *Blood* and other *Juices* being impregnated with the ſaid *vinous Spirits*, theſe *Spirits* meet with the *volatile*, *alkalious Salt*, of which even the *Blood* of ſound People is never deſtitute: by the means of which *Salt* the *vinous Spirit* is *coagulated*, and turned into that ſubſtance (or ſomewhat like it) which *Helmont* calls his *Offa Alba*; which coagulated ſubſtance not being capable of moving with the *Blood* and *Juices* through the *ſmall Veſſels*, cauſes *Obſtructions* and *violent Pains*, and in time, by the addition of other *groſs*, *terreſtrious Particles*, the beforementioned *chalky Subſtance*.

By the aforeſaid *Coagulation* of *vinous Spirits* with the *volatile Alkaly* of the *Blood*, may a very good reaſon be given for the *Generation* of the *Stone* in the *Bladder* and *Kidneys*: And Mr. *Boyle* tells

tells us (being what *Helmont* had before done) that having obtained some *Stones* of a certain *Lythotomist*, he put them into a *Retort*, and exposed them to a *strong Fire*, and found that the better half consisted of *volatile*, *alkalious Salt*, like unto that *obtainable* from *Human Blood*, and a considerable quantity of *heavy Oil*; so that it is plain that the Generation of the *Stone* is not from *Acids*, but *Alkalies*.

From which may be inferred, that it is not from the *Acidity* of *Rhenish Wine*, that the drinking of it is pernicious to *Gouty People*, but from its abounding with *spirituous Particles* more than most other *Wines*.

[I shall here presume to supply some few *Omissions* in my *Tract* of the *Gout*, which is a Piece I doubt not but will gain more and more Reputation in the World every day, the *Method* there laid down being what will generally answer expectation.

I have (*pag.* 79.) given an account of a *Balsam* of admirable use in the taking off the most *violent* and *tormenting Pains*; which *Balsam* after it has been used some time, will cause little *Pimples* and *Blisters* upon the *Part*: Now as soon as the *Blisters* are once rose, the use of the *Balsam* must be left off, which I had forgot to mention, and not be repeated again, till the *Blisters* or *Pimples* disappear.

The *strengthning* of the *Stomach*, and helping the *Digestion*, being what generally goes a great way in the *Cure* of *Chronical Distempers*; therefore to people who either labour under a *Fit* of the

the *Gout*, or are subject to it, I prescribe the constant use of the following *Digestive Powder*, both during the time they labour under a *Fit*, and at other times when they are free from it.

℞ *Crem. Tartari Dracm. sex.*
Cardamomi, Cubebarum,
Galangæ, ana Dracm. duas
Sacchari rosati Unc. unam sem.
M. f. Pul. cap. quantum Mucroni Cultri contineri potest sæpius in die.

Instead of the *Elixir Sulphuris*, mentioned *pag.* 90. I frequently give the following *Elixir Vitrioli*, tho the Intentions of both are the same.

℞ *Garriophillor. Piperis nigri,*
ana non contus. Unc. duas
Spirit. Vini Rect. ℔ unam
digerantur leni calore arenæ, in Vase vitreo optimè clauso per dies septem; tunc guttatim instilla Ol. Vitrioli optimè rectificati Uncias quatuor; digerantur iterum per dies septem in eâdem calore, postea decantetur Elixir clara. Dosis est a gut. 15. ad 20 vel 30.

This *Elixir* is a most noble *Stomachick*, and of *admirable* use in other *Distempers* besides the *Gout*. *Tartarum vitriolatum* and *Cremor Tartari* are *Medicines* I much rely upon in the *Cure* of this *Distemper*; but this ought to be observed, that during the time of a *Fit*, they must be given in such quantities as will procure the *Patient* two or three *Stools* in the *twenty four hours*, and no more,

more, at leaſt after the *ſecond* or *third day*: But if for the *firſt two* or *three days* they do occaſion more *Stools*, it will rather be an advantage to the *Patient* than otherwiſe. Therefore that things may be exactly regulated, the Proportions I have preſcribed muſt be varied according as peoples Conſtitutions and Strength vary.

When the *Pain* is not very ſevere, the *Proportion* of *Ol. vitrioli* in the *Balſam* may be leſs than I have ſet down, *viz. two Drams* of *Ol. Vitrioli* to *two Ounces* of *Ol. Olivarum*: Let them be well mixt together in a *glaſs Veſſel*, till they come to the conſiſtence of a *Balſam*. With this *Balſam* I have two or three times ſeen ſomething very extraordinary done in *ædematous Tumours*; as I have alſo done in eaſing other Pains beſides that of the *Gout*.]

CHAP. IV.

Of Rheumatiſms.

THIS is another of the *Diſtempers* generally ſaid to proceed from *Acids* in the *Blood*, but very falſly, as I hope fully to make appear, I having had to do with multitudes under this *Diſtemper*, and that (*thanks to God*) with very good *ſucceſs*.

I ſhall not trouble my ſelf to inveſtigate the *original Cauſes* of this *Diſtemper*, which are various, that being foreign to my deſign; but ſhall immediately proceed to the buſineſs I have undertaken. Firſt

First of all; having by the *Fire analyzed* the *Blood* of *Rheumatick Persons*, I have found it to abound more with *Alkalious Particles*, than that of *sound Persons*; but not the least grain of any *Acid Substance* in it: from which alone it may readily enough be inferred, That it proceeds not from *Acids*, but, on the contrary, from *Alkalies*.

But it may be *objected*, From whence proceeds that *Syzineſs* and *Viſcoſity* of the *Serum*, which is generally obſerved in the *Blood* of *Rheumatick Perſons*, if not from *Acids*? For we know that *Milk*, which is a ſort of *Serum* of the *Blood*, let it be in never ſo fluid a ſtate, by the addition of any *Acid*, tho never ſo *gentle*, a great part of it will be immediately coagulated and turned into *Curds*.

To which I *anſwer*, That the aforeſaid *Objection* is altogether *invalid*; the *Viſcouſneſs* that is obſerved in the *Serum* of the *Blood*, being quite different from that of the *Curds* in *Milk*; tho there are thoſe ſubſtances contained in *Milk*, that are fit to make both *Blood* and *Serum*; but *Milk* is a much more *compound Liquor* than the *Serum* of the *Blood*: ſo the compariſon being made between Subjects ſo vaſtly different, it is of no validity at all.

But ſuppoſe the compariſon between the *two Liquors* good; what agreement is there between *Curds*, and a Subſtance like unto *Gelly*? None at all that I know of.

But if inſtead of *curdled Milk*, they had made the compariſon between the *inviſcated Serum* and *Harts-horn Gelly*, they had been in the right on't;

For

for indeed I know not any two *Subjects* more fit to be compared together. But then this comparison will not in the least prove the *Inviscation* of the *Serum* to proceed from *Acids*, but on the contrary from *Alkalious Particles*; for every body that knows what *Harts-horn* is, knows that the reason of its making a *Gelly*, is from its abounding with *volatile*, *alkalious Salts*: and for the same reason it is, that *Calves Feet*, *Izing-glass*, *Ivory*, *&c.* make *Gellies*.

By what I have said, I hope I have freed *Acids* from occasioning the *Viscousness* of the *Serum* of the *Blood* in *Rheumatisms*; which *viscosity*, if it can be once taken off, every one knows that the *Distemper* immediately vanishes: But this is not to be done by *Alkalies*, that ever I could see, altho I have given them in large quantities. But it is expeditiously to be done by proper *Acids*, such as the before-mentioned *Tincture* of *Antimony*, *&c.* and *Chalybeats*.

But here I expect that People will think I have caught my self in a *Trap*, when I bring in *Chalybeats* amongst the number of *Acids*, when they are generally owned by all *Mankind* to be *Alkalies*: to confirm the Truth of which, they tell you it is plainly manifest, that *Filings* of *Iron* will make as great an *Effervescency* with all sorts of *Acids*, as any of the *Alkalies* I have mentioned; therefore it is plain I must be much in the wrong in reckoning *Chalybeats* amongst the number of *Acids*.

From this difficulty I shall endeavour to extricate my self, and likewise to prove, That *Iron* or *Steel*, until it be converted into a *Vitriol*

(and every body will allow *Vitriol* to be an *Acid*) cannot act upon the *Blood* or *Serum* to cauſe any alteration in it, nor ſo much as any way enter into the *Veins* or *Arteries*.

It is the Cuſtom of *Skilful Practitioners*, before they give *Steel Medicines*, to enquire of their *Patients*, whether they are ſenſible of any *Acidity* in their *Stomachs*; in which part I do allow *Acids* oftentimes to abound, and that exorbitantly. If they are ſenſible of any *Acidity* there, it is then found neceſſary to give *Iron* or *Steel*, without any *Preparation* at all, by reaſon, that by the means of the *Acids* in the *Stomach*, it is turned into a *Vitriol*, and ſo made capable of being carried into the *Blood*; whereas in ſuch caſes, if it hath been before ſatiated by a *precedent Preparation*, it hath little or no effect at all. On the other hand, if there be no ſenſible *Acidity* in the *Stomach*, *Iron* or *Steel* being given unprepared, are carried off by *Stool*, without the leaſt alteration, or any part of it being admitted into the *Blood*.

All or moſt of the *Preparations* of *Steel* which I know of, that are good for any thing, are performed by the means of *Acids*, which tend to the dividing of their parts, and turning them into a *Vitriol*. Now according to the difference of the *Acids* uſed, the reſult is a different ſort of *Vitriol*, which hath different operations: But on the contrary, *Alkalies* do ſo *lock* up the Body of *Iron*, as to make it unfit to be taken as Medicine, by reaſon of its extraordinary *hardneſs* and *firmneſs* of *Texture*.

The *Preparations* of *Steel* I generally uſe are, that which goes by the name of Dr. *Willis*'s *Preparation* of *Steel*, and is now almoſt every where to be had; which altho it be grown common, is, for all that, no *deſpicable Medicine*; and that which follows.

Take of filings of Steel, *or rather* Iron, *very clean and free from duſt, one* Pound *and* half, Sal Armoniac *two pound; make the* Sal Armoniac *into very fine Pouder; then mix them well together in an* iron *or* ſtone Mortar, *then put the mixture into a moiſt* Cellar, *and let it ſtand a week: Then put it into a very large* Crucible, *which cover with a piece of* Tile; *afterwards put the* Crucible *into a* Charcoal Fire, *which increaſe by degrees, till the* Crucible *be almoſt* red hot; *after it has continued in this ſtate about an hour, take away the* Fire, *and let your* calcined matter *cool by degrees; when cold, take it out of the* Crucible, *and make into fine* Pouder *in a* glaſs *or* ſtone Mortar; *then put it into a* Bottle *with a wide mouth, which ſtop with a* glaſs Stopple, *and keep in a warm place.*

Theſe two *Preparations* properly given, and with convenient *Vehicles*, I have known of very great uſe in *Rheumatiſms*: And the laſt, when all other Medicines have proved ineffectual, has ſcarce once failed me in the moſt inveterate *Obſtructions* of the *Menſes* in *Women*.

Beſides the forementioned *Preparations* of *Steel*, I have frequently found *Cinnaber* of *Antimony*, or even common *Cinnaber* mixt with a

due proportion of *Gum Guaiaci*, and given in large quantities, to be of great uſe, not only in confirmed *Rheumatiſms*, but even in *Sciaticas* of long ſtanding, by the means of which alone I have known many cured.

I did formerly believe *Cinnaber* of *Antimony*, and *common Cinnaber* to be *Alkalies*; but ſince I have more nicely inquired into it, I find that by a peculiar management, a large quantity of an *acid, ſulphureous Spirit* may be obtained from them.

Before I conclude upon this Head, it will not, I ſuppoſe, be amiſs to obſerve one thing more about the Preparation of *Steel* before-mention'd, and that is, that whilſt it is kept dry, and in a *Pouder*, it is one of the greateſt *Deoppilatives* or openers of *Obſtructions* imaginable: But let it be put into a *Cellar*, and run *per deliquium*, which it will do in a few days; 50 or 60 *Drops* of the ſaid *Oil per deliquium*, given twice a day in a ſtrong *Decoction* of *Oak Bark*, I have of late found rarely to fail me in ſtopping a *ſeminal Flux*, which all people will allow has hitherto been found as difficult a thing to do as any whatſoever. Some having told me, that they ſuppoſed the *Stipticity* to proceed from the Decoction of *Oak Bark* only, I have purpoſely tried it alone: and altho I own *Oak Bark* to be a Noble *Stiptic*, and to do Wonders, the *Decoction* being taken in at the Mouth, and by way of *Clyſter*, in common, ſimple *Diarrheas*, and even ſometimes in *bloody Fluxes*; yet in the caſe before-mentioned it would do nothing at all; but adding ſome drops of the *Oil* of *Mars* to the Decoction, it had ſoon the deſired effect.

Of

[Of late I have been induced to uſe the following *Method* in the Cure of *Rheumatiſms*, and in a great number of Caſes it has very rarely failed me; and where it has failed me, I have not had the leaſt *Temptation* to blame the *Method* or *Medicines*, but the Patients for their ſitting up late, and *drinking* to exceſs.

℞ *Tart. Vitriolati Dracm. unam*
Cremor. Tartari Dracm. ſex
Ol. Garrioph. gut. ſex
Sacchari Roſati Dracm. tres
M. f. Pul. in ſex Chartulas diſtribuend. ex quibus cap. unam quater in die in Cochlear. Syr. e Rubo Idæo ſuperbibendo hauſt. Julap. ſequentis.

℞ *Rad. Eringii Unc. duas*
Aq. Font. ℔ duas
Infunde clauſe & calidè per horas duas vel tres, & coletur, colaturæ adde Vini Rubri Gal. Unc. octo
Syr. de Rubo Idæo Unc. Tres
Elix. Vitrioli gut. 40.
M.

℞ *Elix. Vitrioli Dracm. duas*
cap. gut. duodecem in hauſt. Vini Rub. & Aq. Font. ana p. e. horâ dimidiâ ante prandium.

℞ *Sp. Vini non Rect. Unc. ſex*
Ol. Vitrioli Dul. Unc. unam.
M. f. Mixt. cum quâ embrocentur Partes affectæ manè & ſerò, ſuperponendo Pannum lancum.

℞ *Cremor. Tart. Dracm. ſex*
Cardamomi, Cubebarum,
Galangæ, ana Drac. duas
Sacchari Roſati Unc. unam ſemis.
M. f. Pul. cap. quantum Mucroni Cultri contineri poteſt ſæpiùs in die.

After the *Pains* are quite gone, I then preſcribe a *Steel Courſe* for *three Weeks* or a *Month*, during which time I order a continuance of the *Elixir* of *Vitriol* before dinner, and of the *Digeſtive Pouder*.

But in this caſe, as well as in the *Gout*, the quantity of *Cremor Tartar* and *Tartar Vitriolatum*, ought to be ſuch, as to occaſion *two* or *three Stools* in the *twenty four hours*, and no more, at leaſt after the firſt *day* or *two*; and therefore as peoples *Strength* and *Conſtitutions* vary, the quantities preſcribed ought to be leſſened, or increaſed, as there is occaſion.

The *Oleum Vitrioli Dul.* for the *Embrocation* is as follows, that commonly ſold in the *Shops*, which is made by *Diſtillation*, being good for little or nothing.

℞ *Ol. Vitrioli opt. rect.*
Sp. Vini Rect. ana p. e.
cum cautelâ miſceantur, & poſtea digerantur leni Calore arenæ, in Vaſe vitreo optimè clauſo per dies decem, & reſervetur ad uſum.

CHAP.

CHAP. V.

Of Conſumptions.

I Have little to ſay upon this Subject, but that I have ſeen great numbers of People under this circumſtance, to whom have been given large quantities of *Alkalies*, and all ſorts of *Balſamicks*, and thoſe things called *Pectorals*, without the leaſt advantage in the world; tho I have ſeen others who have had the manifeſt ſigns of a confirmed *Phtiſis* or *Conſumption*, who by the plentiful uſe of proper *Acids*, have been reduced from a ſtate of *dying* to that of perfect *Health*.

My Reaſons in ſhort, according to my beſt Obſervations, for the uſe of *Acids*, and the diſuſe of *Alkalies*, are as follow.

The *Globules* of the *Blood*, by reaſon of too great a quantity of *Acrid*, *Alkalious*, *Lixivious Particles* being mixed with it, being broken, and confuſedly mix'd with the *Serum*, are, together with the *Serum*, admitted into the ſmall *Glandules* of the *Lungs*, and not being capable of being diſcharg'd, cauſe *Inflammations* there, and by conſequence *Hectick Fevers*, which always precede and accompany a *Phtiſis* or *Conſumption*. Now by the uſe of *Alkalies* and *Balſamicks*, theſe extravaſated, broken *Globules* are ſo far from being thrown out, and the depraved ſtate of the *Blood* from being altered, that inſtead

ſtead of it, the ſtate of the *Blood* is made much worſe by *Alkalies*; and by *Balſamicks* the *Puſtles* occaſioned from the extravaſated *Globules*, being admitted into the ſmall *Glandules*, are brought to Suppuration, the neceſſary conſequence of which is an *Ulceration*; and when ſo tender a part as the *Lungs* are, is once *ulcerated*, he muſt ſhew himſelf an Artiſt indeed that can heal ſuch *Ulcers*.

Now proper *Acids* being given in due time, confirm the *Texture* of the *Blood*, and reduce the *Serum* to a ſtate of fluidity, by which means the *Fever* and *Inflammation* of the *Lungs* are taken off, and the extravaſated *Globules* of *Blood*, by means of a thin *Serum*, aſſiſted by its quick motion in that part, when in a fluid ſtate, are by degrees carried off, and ſo the *Puſtles* diſappear.

But it may be objected, How comes it to paſs, that the broken *Globules* of *Blood*, you ſo often mention, come to be admitted along with the *Serum* into the *Glands* of ſeveral parts, and that they cannot by the ſame reaſon be carried off to the parts deſigned, along with the *Serum* or *Lympha*, as it is ſtiled, when it once comes into the *Lymphatick Veſſels*?

To which I anſwer, That when they are firſt admitted into the *Glands*, I mean the broken *Globules*, coming juſt out of the extremities of the *Arteries*, and being then very hot, the ſides of them are lax, and ſo in ſome meaſure capable of being compreſſed or ſqueez'd together; but being once admitted into the *Glands*, the motion of the *Serum* from them, through the *Lymphatick Veſſels*, being very ſlow, they ſoon grow cool,

cool, and ſo more firm; and by reaſon of the different figure of theſe broken *Globules* from the Pores, by which the *Serum* is to paſs from the *Glands* to the *Lymphatick Veſſels*, they are not ſuffered to paſs through with the *Serum*, as in the forementioned inſtance of the mixture of *Oil* and *Water*; ſo that the *Globules* being extravaſated and without motion, corrupt, from which Corruption proceed all the ill Symptoms I have mentioned to accrue from the broken *Globules* of the *Blood* being admitted into the *Glands*.

[I am furniſhing my ſelf with Materials, in order to the writing of a particular Tract concerning Conſumptions; in the Cure of which Diſtemper I hope to make more conſiderable Advances than have been yet made, and therefore I ſhall ſay no more concerning them in this place.]

But to return to the buſineſs of *Acids*; to confirm the truth of what I have ſaid, beſides my own Obſervations, I remember *Riverius*, that famous Practitioner, ſomewhere ſays, That he hath ſeveral times cured a confirmed *Phtiſis* or *Conſumption*, by giving only of large quantities of *Conſerve* of red *Roſes*, well *Acidulated* with *Oil of Sulphur per Campanam*.

And now I am ſpeaking of *Oil of Sulphur per Campanam*, give me leave to add an account that *Helmont* gives of it in his *Arbor Vitæ*; which altho it hath not any immediate relation to the Point in hand, yet may be pertinent enough to ſhew the good effects of *Acids*, in keeping the *Blood* in a good Texture, and by that

that means prolonging *Life*, and preſerving us from *Diſeaſes*. *Moſes*, who perhaps underſtood the *Myſteries* of *Nature* as well as any Man, and who was guided by an unerring, *infallible Spirit*, ſays, that in the *Blood* is contained the *Life*. Now the *Texture* of the *Blood* being confirmed, and its *Globules* whole, muſt go a great way towards the prolongation of *Life*: But on the contrary, the *Texture* of the *Blood* being ſpoiled, and its *Globules* broken (which they are by *Alkalies*) muſt in great meaſure ſhorten *Life*, and occaſion *Diſeaſes*.

In the Year 1600. ſays *Helmont*, a certain *Military Man*, being burden'd with a great number of ſmall Children, made his complaint to me that he was 58 years of age, and that if he ſhould chance to die, his Children muſt go begging from door to door. He ask'd of me ſomething, whereby his *Life* might be preſerved. I being then a *Young Man*, and commiſerating his Condition, conſidered with my ſelf, that a *lighted Match* of *Brimſtone* would preſerve *Wine* from Corruption; therefore I concluded with my ſelf, that the *Acid Oil of Sulphur* did neceſſarily ſo contain this *Flame* of *Sulphur*, and all the Smell of it, that it ſelf was nothing elſe, meaning the *Acid Spirit* or *Oil*, but the *Fume of Sulphur* it ſelf, imbibed by its *Mercurial Salt*. Laſt of all, I was confirmed that the *Blood* was the *Wine* of our *Lives*; and that being preſerved, if it did not occaſion *long Life*, it would at leaſt in ſome meaſure be prolonged, by our being guarded from *Diſeaſes*, and free from *Pains*. Wherefore I gave him a

Pot

Pot full of the *Diſtilled Liquor* or *Oil of Sulphur*, and likewiſe taught him the manner of diſtilling the ſaid *Oil* from *kindled Brimſtone*. I furthermore bid him, that every *Meal*, in the firſt draught of *Beer* he drank, he ſhould take two drops of the ſaid *Liquor*, and by no means exceed it; I being ſatisfied that two Drops did contain a large quantity of the *Fume* of *Sulphur*. The Man followed my Advice, and at this time walks about the *Streets* of *Bruxels*, being *Sixteen hundred forty one*. And, which is more than all, for the whole *Forty years* he never laboured under any *Diſtemper*, altho once by a Fall upon the *Ice*, he broke his *Leg* near the *Knee*, yet all the time he was under *Cure*, he was free from a *Fever*. He continued ſlender and lean; and altho in want of all Neceſſaries, lived to be thus *Old*. The Name of this *Old Man* is *John Maſs*, who ſerved in the *Bed-Chamber* of the *Biſhop* of *Ypre*, when *Count Egmont* and *Horne* were beheaded, and was at that time *Twenty five* years of age.

The *Truth* of this *Relation* need not in the leaſt be doubted, the Man being alive and well when it was wrote. By which Inſtance it is plain, that *Acids* are not the Cauſe of *Diſeaſes*, but *Preſervatives* againſt them; and whatever is a *Preſervative* from *Diſtempers*, by the ſame parity of reaſon muſt be of uſe to repel them, when we labour under them.

A ſignal Inſtance of which I remember I have ſomewhere read, of a Perſon who purpoſely ſuffered himſelf to be bitten by a *Viper*, in order to try the good Effects of *Monſieur*

ſieur Charras's Volatile Alkalious Salt of the ſame *Animal*, in preventing and taking off the *Symptoms* that attend the Biting of the ſaid *Creature*. The *Volatile Salt* and other *Antidotes* were in large quantities given, but all in vain; for inſtead of allaying, the *Symptoms* ſo increaſed, that nothing leſs was to be feared, than the loſs of the poor *Man's Life*. To the beſt of my remembrance, nay, I think I may be poſitive, that it was in the *Wriſt* where he was bitten; but for all the *Volatile Salts* and other *Antidotes*, in a very little time his *Arm* was ſwelled ſo big, and ſo high, that *Amputation* could do him no ſervice; nay, all the *By-ſtanders*, which were many, gave him up for *dead*. At laſt a certain Perſon adviſed the giving of him large quantities of only ſo ſimple an *Acid* as *Juice of Limons*; which immediately abated the *Symptoms*, and retrieved him from all manner of Danger.

We live in an inquiſitive Age, wherein People have more ſenſe than to take things upon truſt: The obtaining of the *Blood*, both of well and diſtemper'd Perſons, is no difficult matter; and I deſire no greater juſtice to be done me, than that People would themſelves experiment the truth of what I have ſaid; and if after trial it be found that the *Blood* of perſons in any of the before-mentioned caſes, hath any thing of *Acid* abounding in it, I will own my ſelf in the wrong; but ſhall never take the leaſt notice of ſuch *ſcurrilous Anſwers* as I have been uſed to, nothing of that nature being in the leaſt valid with me, that is not confirmed by well-atteſted Experiments.

The

The Concluſion.

IT is, I ſuppoſe, allowed by every body, that *Sea-Salt* is an *Acid*, and for that very reaſon only it is, that we who eat ſuch large quantities of *Fleſh* are not able to live without it. For all ſorts of *Fleſh* abounding with large quantities of *volatile Alkalious Salts*, if the ſaid *Alkalious Salts* were not in ſome meaſure locked up and mortified by the means of *Sea-Salt*, or which is all one, that which is the product of our *Engliſh Brine-pits*, they having their ſaltneſs from the ſame origine, which is Currents of Water paſſing through great *Rocks* of *Salt*; which late Diſcoveries have made appear to be both in *England*, and many other parts of the World: As for inſtance, one in *Cheſhire*, whoſe Vein is twenty Yards thick, and may be traced for a great many Miles together; which very *Rock* alone is ſufficient to impregnate almoſt an *Ocean* of *Waters*. [Now, I ſay, were it not that the *Volatile Alkaly* contained in the Meat we eat, was in ſome meaſure lockt up or mortified by means of the foreſaid Salt, the eating of quantities of meat would certainly deſtroy us.]

There is ſome reaſon to believe, That the People before the *Flood* did not eat *Fleſh*, but liv'd altogether upon *Vegetables*, as *Fruits*, *Herbs* and *Roots*; which, I ſuppoſe, was one great reaſon of their *Longevity*. And it may be obſerved,

obſerved, that in *Herefordſhire*, and other Countries abounding with *Fruit*, the People are longer *liv'd* than in thoſe Countries that want them. Now had the *Antediluvian People* eaten *Fleſh*, as we do now, I can't imagine what they would have done for Salt: for ſuppoſing Dr. *Burnet's Hypotheſis* true, (the which I think there is not the leaſt reaſon to doubt of, his Arguments to prove it being to me unanſwerable) I ſuppoſe their *Rivers* muſt have been altogether void of *Saltneſs*; and how they could come at *Salt* any other way, conſidering the ſtate of their *Earth* I can't imagine: And for them to have eaten *Meat* without *Salt* muſt neceſſarily have greatly prejudic'd their *Healths*, and ſhortned their *Lives*. For we have ſeen in the late *Iriſh War* what Deſtruction and Deſolation was made in our *Army* by eating Meat without *Salt*, of which at one time there was a ſcarcity, whole *Regiments* having been ſwept away together with *Fevers* and *Fluxes*. But the *Antediluvian People* living upon *Vegetables*, they had no need of *Salt*, there being a ſufficient quantity of *Acidity* in them to confirm the Texture of their *Blood*, and preſerve them from Diſeaſes.

[That the *Food* of the *Antediluvian People* was only *Herbs*, and that the eating of Fleſh was not allowed till the *Waters* of the *Flood* were abated, the following *Texts* of *Scripture* are ſufficient to evince. *Gen. chap.* 1. *v.* 29. After *God* had ſaid to *Adam*, *Be fruitful, and multiply, and repleniſh the Earth*, and had given him *Dominion* over the Creatures, then it comes in; And *God* ſaid, *Behold, I have given you every Herb bearing*

bearing Seed, which is upon the face of all the Earth, and every Tree in which is the Fruit of a Tree yielding Seed, to you it ſhall be for Meat. After the *Waters* of the *Flood* were gone, then *God* bleſſeth *Noah* and his Sons, as he had before done *Adam*, and ſaid unto them, *Be fruitful, and multiply, and repleniſh the Earth*; and then gives them Power and Dominion over the Creatures: after which he ſays, *Ch. 9. v. 3. Every moving thing that liveth ſhall be Meat for you, even as the green Herb have I given you all things.* Now after the uſe of Fleſh was allowed, we don't find any one perſon, *Noah* himſelf excepted, who arrived unto the Age of any of the *Antediluvian Fathers.* The natural reaſon of which is very plain.]

Since I have been mentioning *Sea-Salt*, I ſhall make bold to trouble you with a Relation of a ſtrange and accidental Cure wrought upon a Perſon in a *Tympanitis*, given over as Incurable by the moſt eminent *Phyſicians* of *England*, by barely immerging her two or three times over *Head* in *Sea-Water.*

The Perſon was *Daughter* to an *Eminent Citizen* of *Worceſter*, ſhe had labour'd under a *Tympanitis Three* or *Four Years*; her *Father* applied himſelf to moſt of the *Eminent Phyſicians* for Advice, but all that they could do ſignified nothing. Her *Father*, who is a *Corpulent Man*, has ſeveral times told me, that her *Abdomen* was ſwelled ſo big, that his *Cloak* would not lap round her, and ſhe was then not above *Ten Years* of *Age.* It happened one Morning that her *Mother*, *Two Brothers*, *her ſelf*, and a *Maid-*

ſervant,

ſervant, were bitten by a little *Dog* they had in the Houſe, which was grown *mad*. Advice was preſently given by Dr. *Johnſon*, an *Eminent Phyſician* then living in *Worceſter*, That they ſhould all go to the *Salt-Waters* to be dipp'd; (obſerve by the way, the efficacy of *Salt-Waters* in preventing the dreadful *Symptoms* that attend thoſe People bitten by *Mad-Dogs*) The *Mother*, her *two Sons*, and *Maid-ſervant* were prepared to go; but the Mother did not deſign to take her *Daughter* with her, ſuppoſing her not capable of living till ſhe came to the *Journey's end*. The poor diſtreſſed *Child* ſeeing them all going away without her, called to her *Father*, telling him, He took care of every body elſe, but valued not what became of her; upon which her *Father* being moved with compaſſion, was reſolved ſhe ſhould go, let the event be what it would. Accordingly ſhe was carried down, and when it came to her turn to be dipped, it was as much as two Men could do to *immerge* her over *Head*: After they were all dipped, they were carried to an adjacent Houſe, and put to *Bed*; ſhe had not been in *Bed* many Hours, but ſhe called for a *Pot*, and *piſſed* ſeveral *Quarts*, even more at that one time, than ſhe had done of ſome Months before; and when they return'd to *Worceſter*, which was within a few days, ſhe run out of the *Boat* her ſelf to her *Father* without any help, when ſhe had not been able ſo much as to ſtand of a *year* or two before. To be ſhort, without any other help, ſhe was perfectly cured of her *Tympanitis*, and is now a *Tall*, *Slender*, *Healthy Woman* as any I know.

I

I have mentioned this thing, becauſe I find it not any where taken notice of, and may be of ſervice to others. Nay, I am told that a certain obſcure Perſon in *Herefordſhire* has cured ſeveral by the ſame Method, to his own great Advantage, and withal ſays, that it never once failed him.

I muſt beg the *Lady's* pardon for writing this *Relation* without firſt asking her leave; but ſince I have no other end in it but to ſerve *Mankind*, I doubt not but I ſhall be eaſily excuſed.

Helmont poſitively ſays, and as I my ſelf have found it true, That *Spirit of Sea-Salt* which is an *exalted Acid*, is a certain Remedy in the *Strangury*; which is a *Diſtemper* generally ſaid to proceed from *Acids*; which if it doth, inſtead of being cured, it muſt be highly exaſperated by *Spirit* of *Sea-Salt*, the contrary of which I have frequently experimented. *Helmont* ſomewhere elſe ſays of it, *Eſt namque Acidiſſimus, nec ſibi par habet remedium extinguendis ardoribus Urinæ, etiam præſente in Veſica Calculo.*

I remember that not long ſince an *Eminent Phyſician* told me, That bare *Juice* of *Limons* would ſooner take off the *Heat* of *Urine* in People that are, as we commonly call it, *Clapp'd*, than *Emulſions*, or any of the things commonly uſed: which ſince I have found true; and have alſo found that the *Urine* of ſuch Perſons abounds more with *Volatile Alkalious Salt*, than that of ſound People: Upon which I have been induced to try whether the *Acid Spirit* of *Guaiacum*, which that Wood affords in large quantities, would not be more prevalent in the Cure

of *confirmed Poxes*, than the bare *Infusion* or *Decoction* of the said *Wood*; the which in conjunction with *Cinnaber* of *Antimony*, or *common Cinnaber*, and *Gum Guaiaci*, or else with the before mentioned *Tincture of Antimony*, has seldom failed me in curing the most *confirmed Poxes* without *Salivation*.

I am very apt to believe, that if the *rectified Acid Spirits*, obtainable from most, if not all *Woods*, were made use of, they would be found to be great *Specificks* in most *Distempers*, especially *Chronical ones*.

[I have great reason to believe that *rectified Spirit of Ash*, taken for a considerable time together morning and evening in a *proper Vehicle*, would prove a *Noble Medicine*, in gradually wasting *Stones* already formed in either the *Kidneys* or *Bladder*.]

And since I have mentioned *Specificks*, I do own that it may be rationally enough objected, That my Doctrine of *Acids* does mightily thwart with that of *Specificks*, since there are many *Specificks* that are neither *Alkalies* nor *Acids*, yet seldom fail of *curing Distempers*, as rationally to be supposed to proceed from *Alkalious Particles* abounding, as any whatsoever.

To which I Answer, That I have only brought my Doctrine of *Acids* upon the *Stage*, as a general one, in opposition to the general and pernicious Doctrine of *Alkalies*. For should I deny the Doctrine of *Specificks*, I must deny matter of fact; which is what I shall never do till I am totally deprived of my *Reason*.

There

There is a little Herb called *Paronychia cum Foliis Rutaceis*, or *Whitlow Graſs*, with *Leaves* like *Rew*; the which the *Honourable* Mr. *Boyle* recommends as a *Specifick* in the *King*'s *Evil*. Which *Herb* I have immerged both in moderately *Acid* and *Alkalious Liquors*, yet could not perceive any *Luctus* or *Effervescency*; yet I have known it do wonders in the forementioned *Diſtemper*, and that without having the leaſt *ſenſible Operation*: I ſhall inſtance in one particular.

A *poor Woman* in *Worceſter* having one only *Child* of about *Ten Years* of *Age*, who by *Weaving* of *Bone-lace* maintained both her *Mother* and her ſelf: The *Mother* of the *Child* came one day to me, making a great complaint that ſhe was undone: I asked her the cauſe of her complaint; ſhe told me, her *Child* who kept her in her *old Age* from *Begging*, had for *two Years* had *Scrophulous Tumors* in and about her *Privities*; and that about *Three Months* before, one of the ſaid *Tumours* began to *ulcerate*; and that now the *Ulcers* were crept into her *Body*, which made her uncapable of Sitting. I went immediately with the *poor Woman* to ſee her *Daughter*, and found what ſhe ſaid was true, the poor *Girl* being the moſt miſerable Spectacle I ever ſaw. I remembring what Mr. *Boyle* had ſaid concerning *Paronychia*; and being ſufficiently ſatisfied that there was not the leaſt reaſon of doubting the Truth of any thing he had ſaid, when he related it as matter of Fact upon his own Knowledg; I was reſolved to try it upon this *Girl*: I firſt of all purged her three or four times with

Calamelanos, *Rezin* of *Jallap*, and *Cremor Tartar*; I afterwards gave her two large *Handfuls* of the ſaid *Herb* dried, ordering her to put it into *two Gallons* of *ſmall Beer* after it had done working, and let it ſtand ſix Days, and then to drink it for her conſtant *Drink*: She continued to take it for about *two Months*, in which time, without applying any thing to the *Ulcers*, ſave *clean Clothes*, both *Ulcers* and *Tumours* vaniſhed, and ſhe continued well till I left *Worceſter*, which was two years after the Cure was performed, and is ſo ſtill for ought I can hear, I having ſeveral times enquired after her.

Another Inſtance of the *Operation* of *Specificks*, without their being either *Alkalies* or *Acids*, is that frequently experimented *Decoction* of *Mercury*, after having been boiled for a conſiderable time in *Water*, which has been found not to have loſt the leaſt *Grain* of its former *Weight*, or imparting either *Taſte* or *Colour* to the *Water*; yet this *Water* in which the *Mercury* has been *Decocted*, has not failed of killing and bringing away *Worms*, when other *celebrated Medicines* have failed.

Likewiſe *Crocus Metallorum*, and ſome other *Preparations* of *Antimony*, being barely infuſed in *Wine*, without loſing the leaſt *Grain* of their *Weight*, or imparting either *Smell*, *Taſte*, or *Colour*, to the *Wine* in which they are infuſed, yet never fail of giving the *Wine* a *violently Emettick Quality*. I my ſelf have at ſeveral times poured above *Twenty Quarts* of *Canary* upon one and the ſame *Ounce* of *Crocus Metallorum* poudered, and found that the laſt *Quart* was

was as violently *Emettick* as the firſt; altho after nice trial, I could not find that the *Powder* was diminiſhed one *Grain* in its *Weight*, or had, as is before obſerved, cauſed the leaſt ſenſible Alteration in the *Wine*.

The *Cortex*, that *Noble Specifick* in all *Intermitting Fevers*, I don't apprehend to perform its office as it is either an *Alkaly* or *Acid*; tho being mix'd with *Acids*, it performs its work much better than without them.

It is a general Complaint againſt that *Noble Medicine*, and is the only occaſion of deterring ſome people from the uſe of it, That being given in never ſo large quantities, eſpecially in *Quartans*, it only puts off the *Fit* for a time, but does not totally eradicate the *Diſtemper*, it returning after a certain period of time. To obviate which *Inconvenience*, I have been adviſed to give it after the following manner, which ſeldom or never fails of preventing the return of the *Diſtemper*.

Two Hours before the *Fit*, I give a gentle *Emettick*; after that has done *Working*, an *Opiat*: when the *Fit* is over, I give the quantity of a large Nutmeg of the following *Electuary* with the *Decoction*, and repeat it every *Four Hours* for *five* or *ſix Days*, ordering my Patients to eat ſomething of eaſy Digeſtion within an *Hour* after each *Doſe*: After the expiration of *five* or *ſix Days*, I give it only *firſt* in the *Morning*, and at *five* in the *Afternoon* for a *Week*, eating ſomething after each Doſe.

℞ *Cort. Peruviani elect. Unc. unam*
reducetur in pulverem impalpabilem, & cum
Syrupo Limonum, q. ſ. f. Electuarium.

Immediately after each *Doſe* of which, I give about a *quarter* of a *Pint* of the following *Decoction :*

℞ *Cort. Peruviani elect. Unc. unam*
Rad. Gentianæ Dracm. duas
Flor. Centaurii Pug. duos
Aq. Font. ℔ *quatuor,*
Bulliantur ad dimidiæ partis conſumptionem, & colatur, colatura reſervetur ad uſum.

By this *Method*, I have known *Three* or *Four Ounces* of the *Cortex* perfectly cure *Quartans* without any *Relapſe*, after People have taken a *Pound* or more after the *common Method*, which has only put by the *Fits* for a time.

The *Reaſons*, as I apprehend, why this method of giving the *Cortex* ſhould be more prevalent than that commonly taken, are; the *Particles* of the *Cortex* being very *firm*, the *Medicine* being taken, and the *Patient* faſting *three* or *four Hours* after it, it ſlides out of the *Stomach* into the *ſmall Guts*, and ſo on; the *ſmall Guts* being empty, there is not *preſſure* enough to ſqueeze but a very ſmall quantity of it into the *Lacteal Veſſels*; ſo that the greateſt quantity of it is carried away as *Excrement :* But the *Patient* eating ſomething of *eaſy Digeſtion*, within ſo ſmall a time as an *Hour* after it, that eaten,

is

is turned into *Chyle* before the *Particles* of the *Cortex* can be carried off; and the *Chyle* being of a *Viſcous* Nature, retains the *ſmall Particles*, and carries them along with it into the *Blood*; ſo that the *Blood* is more impregnated by one *Doſe* this way given, than with *twenty Doſes* without preſently eating after it.

As a confirmation of the truth of what I have ſaid concerning the *firmneſs* of the *Texture* of the *Particles* of the *Cortex*; if you boil it never ſo well, the clear *Decoction* will ſcarce cure a *Quotidan* or *Tertian Ague*; whereas the *Cortex* after it hath been well boiled, being reduced to *Pouder*, and given after the aforeſaid manner, will cure a *Quartan*.

It would be a great Bleſſing to the *Commonwealth* of *Phyſick*, if there were a faithful *Record* kept of all the *Cures* wrought by *Simple Medicines*, by which means *Phyſicians* might arrive to a certainty of *Curing* more *Diſtempers* than that of *Agues*; which thing I never expect to ſee, ſo long as *tedious*, *nonſenſical Compoſitions* are depended on.

I don't remember that any of the *Antient* or *Modern Botannick Writers* have mentioned the *Leaves* of *Aſſarabacca* to have any other quality beſides that of a *violent Purger* by *Vomit* and *Stool*: But Mr. *Pitt*, a late *eminent* and *learned Apothecary* of *Worceſter*, my ſingular good Friend, told me, that he found it to be one of the moſt noble *Purgers* of the *Head* that he ever knew, having a different *Operation* from any other *Medicine* that he ever met with; that the *ſnuffing* up of *three*, *four*, or *five* Grains of the *Pouder*

of the *dried Leaves* at *Night* going to Bed, would on the *Morrow*, without diſturbing reſt that *Night*, but rather cauſing it, occaſion the diſcharge of a vaſt quantity of *Serous Matter* from the *Glands* of the *Noſe*; nay, would ſometimes laſt for *two* or *three Days*, without being in the leaſt a *Sternutatory*.

By the repeated uſe of this *Pouder* alone, I have known the moſt *violent*, *confirmed Head-Aches* imaginable taken off, after they have eluded the efficacy of the moſt *Noble*, *Celebrated Cephalicks*: But this ought to be taken notice of, That whoever takes this *Medicine* muſt confine themſelves to their *Houſes*, and keep as *warm* as if they had taken the moſt *violent Purge*.

I have been told by a certain *Gentleman*, who uſes a great quantity of the *Pouder* of this *Herb* amongſt his *poor Neighbours* after the aforeſaid manner, that he was once induced to uſe it in a *Deafneſs* of long ſtanding; he gave the *Patient four* or *five Grains* to *ſnuff* up into each *Noſtril* every *fourth* or *fifth Night*, and ordered that *three Grains* ſhould every *Night* with a *Quill* be blown into each *Ear*; and in a *Fortnight's* time the *Party* recovered his *Hearing* as well as ever in his *Life*.

[Not long ſince I was told by a *worthy Gentleman*, that a *Perſon* who had been *Deaf fourteen Years*, was induced to try whether the *Aſſarabacca* would do him any Service; and in a very ſmall time, uſing it after the aforementioned manner, he was perfectly reſtored to his *Hearing*.]

I could expatiate a great deal more concerning *ſimple ſpecifick Remedies*. But what I have already ſaid is enough to ſatisfy the *World*, that I allow the *Doctrine* of *Specificks*; nay I think it ought to be lamented that it is not more cultivated.

I have been told by ſome *Intelligent Perſons*, who have much converſed with the *Natives of Weſt-India*, that the *Doctrine* of *Specificks* is mightily cultivated by thoſe *barbarous People*, by which means they have arrived to a certainty in *curing* moſt *Diſtempers*; and that to ſee People of *one hundred* and *twenty*, and a *hundred* and *thirty Years* of *Age*, is as common a ſight, as in *England* to ſee People of *ſixty*. Now what a Shame is it for us who live in a *learned* and *inquiſitive Age*, to be outdone by thoſe *barbarous* and *illiterate People?* Nay, for ought I know, the greateſt part of our Skill we had from them, or a *People* altogether as ignorant.

The *Phyſicians* of *Europe* are not arrived to ſo great a certainty in any one thing, as in the *cure* of *Agues*; and who may we thank for that, but the *poor Indians*, who imparted to us the uſe of their *famous Bark?*

From whom had *Hippocrates*, that *Father* of *Phyſicians*, his Skill, but by *collecting* the *common Obſervations?* the which only it was that made him ſo very *famous* throughout the *World*. But the *State* of Nature being in a great meaſure altered in that long tract of time ſince he lived, and the difference of our *Climate* from that wherein he lived, makes that his *Obſervations* don't altogether hold good with us. So that if

we

we will arrive to any certainty in our *Art*, we muſt make nice *Obſervations* of our own.

Helmont in his Treatiſe of *Fevers* ſays, *Quiſque Artificum facit, quòd promittit, Statuarius nempe Statuam, Calcearius Calceos indubiè parat, ſolus autem Medicus nil audet ex arte ſpondere ſuâ, quia nititur Fundamentis incertis, per accidens duntaxat, ſubinde, atque doloſè proficuus.* Which in *Engliſh* is, That there is a certainty in all *Profeſſions* but that of a *Phyſician*; and it is altogether our own Faults, for want of due *Obſervation*, that we act upon ſuch Uncertainties as we do.

But to return to the buſineſs of *Acids*; What great benefit does *Mankind* in general receive from *Mineral Spring-Waters?* All of which are allowed to be *Acids*; and according to the difference of the *Acid* contained in them, they have different *Operations*. Some of them, as *Acton*, *Epſome*, *Dullidge*, *Northall*, &c. abounding with *Aluminous*, as well as *Vitriolick Particles*, work by *Stool*. Others, as *Tunbridge*, *Aſtrop*, *Ilmington*, &c. abounding with *Vitriolick Particles* only, are *Alteratives*, and are generally carried off by *Urine*. The *Bath-Waters*, abounding with *Nitro-Sulphureous Particles*, have a different *Operation* from any of the former, but are generally carried off by *Urine*, tho ſometimes by *Sweat*.

There is ſcarce a *Perſon* labouring under any *Chronical Diſtemper*, or *ill habit* of *Body*, (whoſe Fortune or Buſineſs will permit them) but at the proper Seaſon are ſent to one of the forementioned Places; and I verily believe, to our

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no great Credit, that more *People* are freed from *Chronical Diſtempers* by the uſe of *Mineral Waters*, than by all other *Preſcriptions*: Though I am very well ſatisfied that *Mineral Waters*, not being properly taken, do frequently a great deal of Miſchief.

Beſides the ſervice done to *Mankind* by drinking of *Mineral Waters*, what advantage does accrue to many People labouring under ſome ſort of *Nervous Diſtempers*, *&c.* by meerly *Bathing* themſelves in the *Nitro-Sulphureous Hot Baths*? [But this ought to be well obſerved, that the *bathing* in the *Hot-Baths* is only ſerviceable to thoſe People whoſe *Nerves* are contracted; but in all Caſes where the Parts are *relaxed*, the *bathing* in *hot Baths* is highly pernicious.]

There is alſo a new way of *Sweating* by the means of the *Volatile Acid Steams* ariſing from the *evaporating Brine*, in the making of *Salt* at our *Engliſh Salt-pits*, lately invented by Mr. *Henry Hodges* of *Droyt-Wych* in *Worceſterſhire*, by the means of which ſeveral very great things have been done, even in caſes where the *Bath*, *Common Hummums* and *Bagnios* have proved altogether ineffectual. I am ſorry that I am at a place where I cannot procure a number of *Experiments* to inſert in this place, which might be of ſervice to *Mankind*: but to ſupply the place of them, I ſhall add ſomething done in a little *Bathing-Houſe* I erected of my own, wherein I imitated, if not outdid the way of *ſweating* at *Droyt-Wych*; but my many Avocations hindred me from the proſecuting of it.

I procured a quantity of the *Virgin Salt* from the *Salt-Rock* in *Cheſhire*; and, as I had occaſion, I diſſolved a convenient quantity of it in *Spring-Water*, making a *Brine* as ſtrong as that obtainable from the *Brine-Pits*; with this *Brine* I filled a large *Iron Pot*, which had *Pipes* of *Wood* went from it to a little *Room* over-head, made convenient for People to *ſweat* in: Under my *Pot* I made a fire, which both warmed the *Room*, and made the *Brine* to boil; and from the *boiling Brine* aroſe ſuch quantities of *Steams* as filled my *Room*, which, when it was warmed and full of *ſteams*, was fit for uſe: I had, beſide the large *Pipes* which ſupplied the whole *Room*, ſeveral others of different lengths, by the means of which I more forcibly conveyed the *Steams* to any particular part. By this way of *Sweating*, I have known a Gentlewoman Cured, as was alſo one at *Droyt-Wych*, of an *Inveterate Leproſy*, which had eluded the Efficacy of all other *Medicines* and *Baths*. It rarely failed taking off the moſt violent *Old Aches* and *Pains*. In all *Relaxations* of the *Nerves* and *Tendons*, I have never met with any thing comparable to it. To be ſhort, I found it as good as the *Bath* in moſt things, and in many out-did it; and I believe Mr. *Hodges*, computing the time he has uſed the way of *Sweating* at his *Brine-Pits*, and the number of People he has had, can produce a greater *Catalogue*, and more conſiderable *Cures* wrought, than hath been at the *Bath*.

[But here it may fairly be objected, that I allow the *bathing* in *Hot-Baths* to be only ſerviceable

ceable where the Parts are *contracted*, and pernicious where they are *relaxed*. Yet I commend the *bathing* in these *Hot Steams*, to be of admirable use where the parts are *relaxed*: in which there seems to be a plain Contradiction.

To which I answer. That during the time that *People* are incompassed in the *Steams* and *sweating*, there is a *Universal Relaxation* of all the Parts; but the *Steams* proceeding from the *Dissolution* of the *Virgin Salt*, being full of *Volatile Acid Particles*, the parts being greatly relaxed in *Sweating*, are capable of receiving the said *Particles* into them, and by the means of them, as soon as the Sweating is over, they regain a greater Vigour and *Contraction*.]

I hope by the means of *Experimental Philosophy*, so happily begun and encouraged by that *admirable* and never sufficiently to be valued Mr. *Boyle*, to see the *Art* of *Physick* arrive to as great *Certainty* and *Perfection* as other *Arts* and *Sciences* are arrived to. For, as I before observed, by *Chymically Analyzing* the *Blood* and *Juices*, both in their *natural* and *morbid states*, we may arrive to some certainty in the *Knowledg* of the *Cause* of *Distempers*, which I am afraid we have hitherto been greatly ignorant of; and when once the *Causes* of *Distempers* are throughly known, the *Cure* of them will be no difficult matter.

I shall conclude in the Words of that *Industrious Philosopher* by the *Fire*, *Helmont*, in his Treatise *De Lithiasi*: *In nostris furnis legimus, non esse in Natura certius Sciendi genus ad cognoscendum per causas*

causas radicales & constitutivas rerum; quamdum scitur quid, quantumque in re quaque sit contentum. Ita quidem ut cognitio & connexio causarum, non constent clarius, quam cum res ipsas ita recluseris, ut coram prodeant, ac velut tecum loquantur. Siquidem entia realia, duntaxat stantia, in suis primordialibus, & succedentibus seminum Principiis, adeoque in verâ entitate Substantiali dant notitiam, & proferunt causam cognoscendi Naturam Corporum, Mediorum & extremitatum. Quippe sunt causæ generationis, existentiæ & permutationis, secundum ipsorum radicem, quoniam (teste Raimundo) utcunque Logicus habeat profundum ingenium Argumentabile, aut Naturale, de rebus extrinsecis: tamen nunquam per aliquam rationem quæ venit ad sensum, poterit directè cognoscere, nec judicari, cum quali natura, aut virtute, per fortitudinem intrinsecus, habeat Multiplicatio grani, crescere super terram, nisi pro similitudinario, ab observatione desumpto. Nec sciet unquam, quomodo semen in terra pullulet, crescat, & coligat fructum: Nisi cum doctrina experimentali prius intraverit in nostram Philosophiam Naturalem, & non Sophisticam, sermocinalem illam, quæ nascitur Logicis, per diversas præsumptiones Phantasticas: qui cum prognosticationibus sequelarum, contra vim Naturæ, faciunt multos pertinaciter errare in Sophisticatione mentis. Quia per nostram Mechanicam Scientiam, intellectus est rectificatus, vi experientiæ, respectu Oculi, & veræ notitiæ mentalis. Imo experientiæ nostræ stant supra probationes Phantasticas Conclusionum; ideoque nec eas tolerant: Sed omnes alias Scientias ostendunt vivaciter intrare in intellectum. Unde deinceps intelligimus per Naturam, intus illud, quod est, & quale

quale eſt. Quia per talem Scientiam, Intellectus ſtat denudatus Superfluitatibus & erroribus, qui ipſum ordinariò removent à veritate, propter præſumptiones & præjudicata credita in concluſionibus. Hinc enim noſtri ſe direxerunt ad intrandum per quamlibet ſcientiam, (in omnem experientiam) per artem, juxta Naturæ curſum, in ſuis univocis principiis. Spagyria enim ſola, eſt ſpeculum veri intellectus: Monſtratque tangere, & videre veritates earum, in claro lumine. Nec fert argumenta logicalia; quia nimis remota, & longuinca, de claro lumine. Ideoque habet tabula ſmaragdina: Per hoc genus demonſtrandi, fugiet à te omnis obſcuritas, & acquiritur tibi omnis fortitudinis fortitudo fortis, vincens omnia ſubtilia, & ſolida penetrans; propterea vocor Hermes Triſmegiſtus, habens tres (id eſt omnes) Partes Philoſophiæ, atque totius mundi Teleſmon; Hæc ille inter orare ergo & pulſare, ſupponitur Medium in Naturalibus, quærendi per ignem.

FINIS.

Some Farther

CONSIDERATIONS

Concerning

ALKALY and ACID,

By way of

APPENDIX

To a Late

ESSAY.

WHEREIN

The *Terms* are made Clear, and the *Natures* of them Both more fully Explained: Together with an *Answer* to the *Objections* that have been raised against some Things contained in the said *Essay*.

By JOHN COLBATCH, *Physician, A Member of the College of Physicians*, London.

The Second Edition Corrected and Enlarged.

LONDON,

Printed for *Dan. Brown*, at the *Black Swan* and *Bible* without *Temple-Bar*, 1698.

TO THE

Learned and Ingenious

Dr. EDWARD BAYNARD,

Fellow of the College of Physicians,
LONDON.

Honoured Sir,

THE *Civil* and *Gentleman-like* Treatment I met with the first time I saw you, and the many *Favours* I have receiv'd from you since I have been honoured with your more *Intimate Acquaintance*, embolden me to prostrate this *Trifle* at your Feet; not pretending thereby to

merit any thing from you, but as a juſt *Acknowledgment* of the many *Obligations* I lie under. It would be a Wrong to you for me to ſpeak any thing in your *Praiſe*, your *Merits* being better known than I am able to repreſent them. It was you, *SIR*, who were (for ought I know) the moſt early *Cultivator* of the *Doctrine* of *Acids* in the Cure of *Diſeaſes* in this Nation; and the *Succeſs* you have had in your *Practice* ſufficiently makes it appear, that you very well underſtood what you went about, when you durſt contend with the whole *World*, by treading in a *New Path* to aid and ſuccour *Life*, which few *Phyſicians* ever went before. *Macte! SIR*, in ſo Great a Work as in Saving from the *Grave*; ſo ſhall the Name of *BAYNARD* not be known to the *Widow*, nor the Cries of the *Fatherleſs* entail *Vengeance* on your *Houſe*.

Houſe. And would your *Multiplicity* of *Buſineſs* but permit you to collect your own *Obſervations*, and make them Publick, I am ſure the Mouths of all your *Oppoſers* would be for ever ſtopped, and their *Errors* cured by your *Healing Hand*; for I know your *Charity* extends to *Lunacy*, as well as other *Diſeaſes*: For none but the *Moon-ſick* can doubt ſo known and clear a *Truth*, as are the daily and moſt apparent *Cures* done by (the Happy *Diſcovery* of) the Uſe of *Acids*. 'Tis well known, *SIR*, that *Nature* and *Art* have ſufficiently arm'd you for any *Enemy*, if ſuch there are; tho your *Condonable Diſpoſition* is like the *Sun*, which ſhines even upon the *Curs* that bark at him. Your Pardon, *SIR*, for this Trouble, and I doubt not but from you to meet with a Generous Acceptance and Protection; and if

Dr. *Baynard* espouse my Cause, I care not who is against me. I assure you I bring no common *Inclinations* to serve you; neither would I by ordinary *Testimonies* express that *Passion* wherewith I am,

SIR,

Your most Humble, and

most Devoted Servant,

JOHN COLBATCH.

THE PREFACE.

I *Have ſo enquired into the Cauſes of* Diſeaſes, *as to be altogether certain of the truth of the* Hypotheſis *I have already advanced, and am now, in ſome meaſure, endeavouring to confirm: But I don't at all pretend to have arrived to ſo much Certainty as by the* Methods *I take to make People* Immortal, *and that no Perſon ſhall die with whom I am concerned, which is what I believe ſome People have expected fom me. But for my part, I ſhall always entirely ſubmit to, and have reſpects for the* Providence *of the* Almighty, *who alone is the* Author *and* Diſpoſer *of our* Lives; *and who by the Mouth of an* Inſpired Writer, *has declared, That our days are determined; and beyond the Limitation, ſet by that wiſe* Author *of* Nature, *we cannot paſs; it being altogether impoſſible for* Creatures *to contend with their* Creator, *or to extend the Time that he hath limited.*

Phyſicians *are of all Men, without doubt, the moſt unhappy*; *People in their* Extremities *looking upon them as their* Saviours *and* Deliverers; *yet after all, they having done as much as 'twas in the power of Man to do, having in all reſpects acquitted themſelves with the utmoſt Fidelity and Diligence, if their* Patients *die, their appointed time being come, and the number of their days allotted them by the* Almighty *being expired*; *yet the* Friends *and* Relations *of the* Party *deceaſed, ſeldom fail to charge them in one reſpect or other, tho inſtead of being blamed, the* Phyſician *has deſerved their utmoſt* Favour *and* Eſteem.

By what I have ſaid, I would not be underſtood, That I am ſo far a Predeſtinarian, *as to believe that* Peoples Lives *are not frequently* prolonged *by the uſe of fit and proper* Medicines: *For if it were not ſo, why ſhould the wiſe* Creator *have been at ſo much trouble, in providing ſuch a vaſt number of* Medicines *in the* Animal, Vegetable, *and* Mineral Kingdoms, *if he did not by them deſign a real ſervice to* Mankind *in* diſtreſs?

God *generally gives a* Bleſſing *to proper Means, it not being uſual for him to work* Miracles *very day. He teaches the* Plowman *how to* plow *his* Ground, *and the* Seedſman *to* ſow *his* Seed; *but the* Plowman, *inſtead of a* Plow, *muſt not uſe a* Harrow; *neither muſt*

the

the Seedſman *expect to reap* Wheat, *if he ſows* Barley. *So it is in the* Practice *of* Phyſick; *he that expects ſucceſs in his* Practice, *muſt firſt endeavour rightly to know the* Cauſes *of* Diſeaſes, *and then to uſe fit Remedies, and after that the* Event *muſt be left to the* Bleſſing *of the* Almighty.

The Plowman *may* plow *his* Ground *aright, and the* Seedſman ſow *his* Seed *in due* ſeaſon, *and after all is done, they may* reap *no* Crop: *ſo the* Phyſician *may have an exact knowledg of the* Cauſes *of* Diſeaſes, *and may uſe the moſt fit and* proper Medicines *in the* World, *and yet at laſt be fruſtrated in his Aim. Which ought to ſhew us what an exact reliance and dependance we ſhould have upon the* Bleſſing *of* God *on all our* Endeavours, *without which we are like to make but little progreſs in any thing.*

I tread in an unbeaten Path, *and therefore cannot ſo happily and eaſily arrive at my* Journey's *end, as if I had had ſome body or other before to have chalked out my way for me.*

I hope I ſhall not by theſe Endeavours incur the diſpleaſure of any one of thoſe Phyſicians *who are of a contrary* Judgment *to me, they being ſtill at liberty to uſe their own* Methods, *and* Alkalious Medicines: *For tho we act upon different* Principles, *our Ends and Deſigns are the ſame, which are the* Cure *of* Diſeaſes; *and if I, after a multitude of* Experiments,

am

am convinced that Acids *are not the* Cauſes *of* Diſeaſes, *but on the contrary that* Alkalies *are, and upon that ſcore am induced to uſe* Acids *in all or moſt* Diſtempers; *I don't ſee any reaſon why People ſhould reproach me for it, ſince I have made no Perſonal Reflections upon any one.*

As for the Phyſicians *of our own* Nation, *I have the higheſt Value and Eſteem for them, having generally found them to be Men of greater* Learning, *and who underſtand the Buſineſs of their* Profeſſion *better than any of the* Phyſicians *I have at all met with abroad.*

Some

Some farther

CONSIDERATIONS

Concerning

Alkaly and *Acid*, &c.

I Thought to have ſaid no more upon this *Subject*, until the *Publication* of my *Hiſtory* of *Human Blood*; but finding that to be a thing of greater difficulty, and that a much greater *Number* of *Experiments* than I at firſt thought of, will be neceſſary to make that *Hiſtory* compleat in all its Parts; by which means it will be a great while longer than I at firſt intended, before that *Piece* appears in the *World*: Therefore I have thought fit,

Firſt, To explain the *Terms*, or what is meant by *Alkaly*, and what by *Acid*; which I find very many people, who are not *Phyſicians*, are in great meaſure ignorant of.

Secondly, To explain the *Nature* of them ſomewhat more fully and clearly than I have yet done.

Thirdly

Thirdly and *Laſtly*, To anſwer the *Objections* that have been raiſed againſt ſome particular things contained in my *Eſſay*.

All which Heads I ſhall handle with as much Brevity and Perſpicuity as poſſibly I can; omitting the more full Proſecution of them, till the Publication of my *Hiſtory* of *Human Blood*, which ſhall come abroad as ſoon as poſſibly I can; but before it is perfectly compleat, it will, I doubt, be ſome Years.

I ſhall make bold to declare, That I have not publiſhed this *Doctrine* of *Alkaly* and *Acid*, out of any deſign of appearing *ſingular*, or being the *Head of a Faction*, but out of meer *Pity* and *Compaſſion* to *Mankind*, my *Fellow-Creatures*, whoſe *deplorable Circumſtances* under *Miſtaken Methods* I have *long bewailed*, to ſee *Phyſick* made the *Scene* of *Slaughter*, and ſo many miſerable *Mortals* (the helpleſs *Sick*) ſent daily to their *Laſt Homes*, as *Victims* to *Error* and *Ignorance*; whilſt the *Learned Preſcriber* jogs on in his old miſtaken *Alkalious Road*; not dreaming (as the Wiſe-Man ſays) *that Death is there, and that his Portion* (I mean the Patient's) *is with the Worms*.

But that I may return to my Buſineſs.

Firſt, To explain the *Terms*, or what is meant by *Alkaly*, and what by *Acid*.

Alkaly derives its Name from the *Herb Kaly*, from the *Aſhes* of which *Herb* is extracted a large quantity of *Salt*, which by the *Venetians* and others is much uſed in the making of *Soap* and

and *Glaſs*; and this *Salt* they call *Sal Kaly*, and by leaving out the *S*, *Alkaly*. Now the *Aſhes* of all or moſt *Vegetables* affording a *Salt* of the ſame nature with the *Aſhes* of the *Herb Kaly*, therefore all *Lixivial Salts* are equivocally called *Alkalies*, and all other things of the ſame *nature*, whether manifeſtly *Saline* or not, *Alkalies*; ſuch are *Arſnick*, and all the *Teſtacea*, as *Pearl*, *Coral*, *Crabs Eyes*, *Oyſter-Shells*, &c. and all *Urinous Spirits* and *Salts*, ſuch as *Spirit* and *Salt* of *Blood*, *Urine*, *Harts-horn*, &c. And ſome think, that of theſe *Alkalies* are made the famous *White Pouder* ſo much talk'd of, which kills without a *Bounce*, and *murders* without making a *Noiſe*.

Acid, I ſuppoſe, did firſt derive its name from *Acaid*, an *Arabian* Word for *Acetum*, *Vinegar*, which is the moſt common and known *Acid*; and therefore all things of the ſame *Taſte* and *Nature* with *Vinegar*, are *Acids*: ſuch are the *Juices* of moſt *Fruits* and *Plants* in their *Natural ſtate*, and *unfermented*; tho all *fermented Vegetable Juices* do after *Fermentation* retain ſomething of their priſtine *Acidity*, tho not in ſo eminent a degree. But every body knows that all *fermented Juices*, ſuch as all ſorts of *Wine*, *Ale*, *Beer*, &c. let them be preſerved with never ſo much care, will at laſt return to their priſtine ſtate of *Acidity*. All *Metalline Sulphurs* are to be ranged amongſt the Number of *Acids*, they being nothing but a Congeſtion of *Acid Particles*. I may likewiſe without preſumption reckon all ſorts of *Balſams*, and *Pinguedinous* and *Oleaginous Subſtances*, amongſt the number of *Acids*;

cids; by reaſon that in the moſt bare and ſimple Diſtillation, they afford large quantities of *Acid Subſtances*, but nothing that is *Alkalious*. *Bread* alſo, that is not without reaſon accounted the *Staff* of *Life*, affords alſo by Diſtillation a large quantity of an *Acid Subſtance*, which is no deſpicable *Menſtruum*. *Sugar*, which tho in its Taſte ſeems to be nothing leſs than an *Acid*, yet by a *Philoſophical* Management appears to be nothing elſe but a Congeſtion of *Acid Particles*.

Thus for the preſent I think I have given a ſufficient account of what I mean by *Alkaly*, and what by *Acid*; and alſo what things are to be accounted *Alkalies*, and what *Acids*.

There are ſome things which ſeem to be of a mixt nature between *Alkaly* and *Acid*, which things we call *Neutrals*. Now thoſe things of this *Tribe*, which afford by much a greater quantity of *Acid Subſtances* than *Alkalious* ones, I ſtick not to call *Acids*, becauſe the *Acid* predominates; and thoſe that afford by much a greater quantity of *Alkalious* than *Acid Subſtances*, I call *Alkalies*. Tho in a more ſtrict ſenſe they deſerve rather to be called either *Sub-Acid Alkalies*, or *Sub-Alkaline Acids*, according as either the one or the other predominates.

I ſhall now proceed to my *Second* thing, which is, To explain the Nature of *Alkalies* and *Acids* more fully and clearly than I have yet done.

For the well performance of which Task, I ſhall compare the Operation of them both upon Human Bodies, both internally taken, and externally applied.

I

I ſhall begin with *Sal Kaly*, which is the *Standard* of *Alkalies*, and compare that with *Vinegar*, the *Standard of Acids*.

Sal Kaly, and ſo all *Lixivious*, *Vegetavle Salts*, as *Salt* of *Wormwood*, &c. being applied outwardly to the bare *Skin*, *ſcorcheth* and *burneth* the ſame, all one as if a *Red Hot Iron* were actually applied to it, cauſing an *Eſcar*, which falling off, an *Ulcer* follows: Nay, indeed there is ſcarce any other *Cauſtick* uſed, than a *Lixivium* of *Sal Kaly*, which is what the *Chirurgeons* call *Capital* or Strong *Soap-Lees*, evaporated to Drineſs. The ſame being taken inwardly, without being greatly diluted by ſome *Aqueous Vehicle*, in moſt people cauſeth enormous *Vomitings*, which I my ſelf have formerly experienced; and if it be never ſo much diluted, if it doth not excite *Vomitings*, it rarely fails of either *depraving*, *palling*, or totally *deſtroying* the *Appetite*: Beſides, being conveyed into the *Blood*, by breaking its *Globules*, and ſpoiling of its *Texture*, it cauſeth either *Scorbutes*, *Rheumatiſms*, *Sciatica's*, *Conſumptions*, *Gout*, *Palſies*, or ſome other of the fatal Tribe of *Chronical Diſeaſes*.

Now I have ſhewn what *Sal Kaly*, and the reſt of the *Tribe* of *Vegetable Lixivious Salts* will do; in the next place let's ſee what effects even common plain *Vinegar*, which is the ſtandard of *Acids*, will have, being externally uſed, and internally taken.

It is well known, that *Vinegar* being externally applied, is of extraordinary uſe in a great many ſorts of *Inflamations*, of ſingular uſe in

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an *Eriſipelas*, or St. *Anthony's Fire*. Clothes being dipp'd in it, and applied to the *Forehead* and *Temples*, to the *Wriſts*, the *Stomach*, and *Bottoms* of the *Feet*, I have experimentally found to be of extraordinary uſe in ſome very *burning Fevers*: I have likewiſe my ſelf (before I had found out a more certain Remedy) ſometimes made uſe of it with good ſucceſs in great *Bleedings* at the *Noſe*, by dipping a *Spunge* in good ſtrong *Vinegar*, and applying it to the *Scrotum*. I have alſo known it with good ſucceſs to have been made uſe of by poor people, in ſtinking old *Ulcers*. From all which it appears, that being externally applied, it's no *Cauſtick*, and will make no *Ulcer*, but on the contrary, will cure *Ulcers*, eaſe *Pain*, *&c.*

Now we have ſeen ſome of its good Effects, being externally applied; let's ſee what it will do, being internally taken.

In the firſt place I ſhall mention an Account given of it by the *Ingenious* Dr. *Baynard*: He ſays that he was called in to a Perſon who had a Total *Suppreſſion* of *Urine*, under which he had laboured ſome conſiderable time, and that ſeveral things had in vain been given him; he immediately gave him a large *Draught* of *Vinegar*, which ſoon made him to *piſs* freely; and by repeating of it two or three times, he was perfectly freed from his Indiſpoſition. The *Doctor* has given an account of this in one of the *Philoſophical Tranſactions*; but I have not read it, neither have I time at preſent to look over thoſe Papers. I think alſo he has told me, that the ſame thing he has done with the ſame plain

Medicine

Medicine two or three times. He likewiſe gave me ſeveral Inſtances of many Perſons in moſt violent *Fevers*, who have been preſently cured by drinking large Draughts of *Atterpool Water* well *acidulated*.

I am alſo moſt creditably inform'd, That Dr. *Bently*, a late famous *Phyſician* in *Cheſhire*, who lived to almoſt a *Hundred Years* of *Age*, had ſuch wonderful Succeſs in *Fevers*, that he acquir'd the Name of the *Fever-Doctor*, and that his *Medicine* was nothing elſe but the Decoction of a certain *Herb* well acidulated with the *Spirit* of—— a Noble *Acid*, which I am obliged not to reveal.

A *Worthy Lady*, whoſe Name I muſt not mention, has aſſured me, That ſhe has brought in the uſe of *Vinegar*, or *Verjuice Poſſet-drink*, amongſt her poor Neighbours in the *Country* where ſhe lives, in the *Small-Pox*; and where that has been uſed from the beginning, ſhe has ſcarce obſerv'd any one to *die* or be *disfigured*; which is agreeable to what I obſerve in my *Eſſay*, *p.* 24. *1ſt Edition*.

I have likewiſe often obſerved, that *three* or *four Spoonfuls* of *Vinegar* will immediately check the moſt violent *Vomitings*, occaſioned by the taking of ſome harſh *Antimonial Medicines*.

A great many other good *qualities* hath ſimple *Vinegar internally* taken, and *externally* applied (beſides its being a good *Menſtruum*) that I think not fit here to enumerate.

[Some few Months ſince meeting with a *Treatiſe* of the *Plague*, written by one *Kemp* a *Maſter* of *Arts* (in all appearance a *Judicious*, *Honeſt*

Man) and there finding a very large *Encomium* of *Vinegar*, I could not forbear inſerting it in this place. I ſhall not tranſcribe all he ſaith of it, by reaſon that would take up too much room, but only what is moſt material.

In the *Works* of ſeveral *Phyſicians* (ſays Honeſt Mr. *Kemp*) there is often mention made of taking *Vinegar*, as it were by the by, in a ſmall inconſiderable quantity, not for its own ſake, but with other *Medicines*, as if it were only a thing to help them down the better, and make them palatable: they will tell you that *Vinegar* is good with *Cucumbers*, and gives a pleaſing reliſh to a *Sallet*; whereas in truth neither the one nor the other are good without the *Vinegar*. It is a thing which is not only *wholeſom* in it ſelf, but alſo makes other things *wholeſom*, and takes away their *Hurtfulneſs*. When you ſpeak of this *ſingular Liquor*, away with cold Commendations, which argue rather a willingneſs to diſpraiſe, than a readineſs to commend: If it did *whet* ones *Wit* as much as *ſharpen* ones *Stomach*, there could nothing *dull* or flat be ſpoken of it. It is *Food* and *Phyſick*, *Meat* and *Medicine*, *Drink* and *Julep*, *Cordial* and *Antidote*. Did you formerly taſte it but as common *Sauce?* Do you now eat it as a *common Remedy*. When you are *well*, it is a *Preſervative* from *Sickneſs*; when you are *ſick*, it is a *Reſtorative* to *Health*. 'Tis like *Apparel*, which you put on, not only for *Comelineſs* to hide Shame, but alſo for *Warmth* to keep out *Cold*. 'Tis like the *Swords* which the *Gallants* wear, not only for *Ornament* when they walk, but alſo

ſo for *Defence*, to fright a *Thief* when they *travel*, and ſlay an *Enemy* when they *fight*. 'Tis *Reliſh* for *Sauce*, 'tis *Sauce* for *Meat*, 'tis *Medicine* for *Diſeaſes*, 'tis *Cordial* for the *Heart*; and not only a *Cordial* for the *Spirits*, but an *Antidote* againſt *Poiſon*; not only an *Antidote* againſt *Poiſon*, but againſt the *Plague*, the chief of *Poiſons*: So *Vinegar* is the Chief of *Antidotes*, as the *Sword* is the *King* of *Weapons*.

If you conſider the *Plague* as ariſing from the *Corruption* of the *Humours* (as indeed it is the *ſupream* and higheſt degree of *Putrefaction*) you may alſo take notice that nothing reſiſts it more. 'Tis *Vinegar* that keeps *Fiſh*, as *Salmon*, *Oiſters*, and the like (which otherwiſe would ſoon *corrupt*) from *Rottenneſs* and *Stinking*: and if it would not do ſo much for Fleſh, why hath it been ſo much uſed for the *embalming* of *Dead Corps*? nay it doth not only preſerve, but recover *Fleſh* from *Corruption*. Roaſt *ſtinking Meat*, and baſte it with *Vinegar*, and it ſhall neither offend your *Noſe* nor *Palate*.

If you conſider the *Plague* as a *Poiſon*, *Vinegar* is an *Antidote* againſt it. Hence 'tis that *Phyſicians*, to ſuppreſs and take away the fiery *Venom* of *Spurge*, *Laurel*, *Mezereon*, and other *Plants*, ſteep them in *Vinegar*, and ſo give them ſafely to their *Patients*; whereas otherwiſe they would kill, and be a worſe *Remedy* than the *Diſeaſe*. Some have been *choakt* by eating *poiſoned Muſhrooms*; but had they taken a Draught of *Vinegar*, they had been out of danger. *Diaſcorides* tells you it reſiſts all *Poiſons hot* and *cold*; and *Celſus* ſaith it is the moſt *ef-*

fectual Remedy againſt them; and tells of one that was *poiſoned* by the *Sting* of an *Aſp*, who being at ſuch a place where there was no *Liquor*, and not being able to go to another where any might be had, by chance he found a *Flagon* of *Vinegar*, which he drank all off, and preſently recover'd.

Hath the *Plague* taken away your *Stomach*? *Vinegar* will ſtir it up, and get you an *Appetite* unto your *Meat*. Is your *Throat ſcorcht*, your *Tongue black* and *chopt*, and your *Mouth ſore*? any *ordinary Nurſe* will tell you the virtue of *Vinegar* to make a *Gargariſm*, and waſh it. Are you like to be *choakt* with *Phlegm*? *Syrup* of *Vinegar* is a common *Medicine* to cut it. Is your *Brain* loaden with *Vapors*, that you are like one in a *Lethargy* or *dead Sleep*? Let ſome *Vinegar* on a *hot Iron* be *ſmoakt* under your *Noſe*, and it preſently makes you to awake. Are you *pain'd* in the *Head*, and troubled with tedious *Watching*? Wet a *Roſe Cake* or *Cloth* in *Vinegar*, and lay it to your *Temples*, and you may go to *ſleep*, and take your *reſt*.

At laſt he thus concludes. 'Tis for the *Virtue* of *Vinegar* that I wrote this *Book*. I would be loth to preſent you with a *Glow-worm* inſtead of a *Diamond*; or put a *Bulruſh* inſtead of a *Spear* into your *Hand*, when you are to *fight* with ſuch an *Enemy*. Imagine well, and think highly of this *Medicine*. I value my own Life as much as another doth his: I had rather take *Vinegar* alone than many other, nay than any other ſingle *Medicine* without it. Deſpiſe it not, becauſe it is eaſy to be had; neither let it be

be contemned, becauſe familiar. It is the more *excellent*, becauſe *common*; the more *precious*, becauſe *cheap*: the Virtues of it are ſo many, that they will hardly be believed; and therefore the greater, becauſe *incredible*.

This plain *Medicine* cannot be ſufficiently recommended for the uſe of *poor People*, eſpecially in *inflammatory Diſeaſes*, in moſt of which it has ſcarce a fellow; for which cauſe I have tranſcribed what this *honeſt Man* has ſaid about it.]

The next thing I ſhall do, will be to compare *Arſnick*, as the *higheſt* and moſt exalted *Alkaly*, with *Oil of Vitriol*, the moſt exalted *Acid*.

As for the external uſe of *Arſnick*, I know nothing of it *experimentally*; but it being a thing of that pernicious conſequence *internally* taken, I ſuppoſe it can have no very friendly *operation* externally applied.

Internally taken, it cauſeth the moſt *enormous Vomitings* and *Convulſions* of the *Stomach*, *cold Sweats*, *Palpitations* of the *Heart*, *Swoonings*, moſt violent *Thirſt*; and in general, ſeems to be a direct *Enemy* to *Life*, which in a ſhort time it fails not to deſtroy. All which effects it will not fail to have, given in never ſo ſmall a quantity. And all thoſe people who have been ſo vain as to pretend to correct the *Poiſonous*, *Venomous Quality* of *Arſnick*, ſo as to convert it into a good and ſafe *Medicine*, have attempted it only by the means of *Acid Salts*, ſuch as *Sea-Salt*, *Nitre*, *Tartar*, *Vitriol*, &c. wherein I cannot tell whether any *Man* hath yet been ſo *happy* as to ſucceed.

To prove *Arſnick* to be an *Alkaly*, and as ſuch the Cauſe of all thoſe *dreadful Symptoms* that attend thoſe people who are ſo unhappy as to take it, I ſhall inſert a Relation made to me by Mr. *Payne* an Apothecary of *Brentford*, on *Saturday*, Feb. 16. which was as follows:

A certain *Young Woman* of *Brentford* having taken a very large quantity of *Arſnick* (as he told me, an *Ounce*) ſhe was immediately attended with all the moſt *violent Symptoms* imaginable; upon which Dr. *Morris* was called in, who gave her large Quantities of *Sallet Oil*, the *uſual Remedy*, without the leaſt abating the *Symptoms*: Upon which he ordered them to procure a *large quantity* of *Limons*, and to preſs the *Juice* out of them; of which *Juice* he *plentifully* gave her, which ſoon took off and abated thoſe *imminent* and *direful Symptoms* which inevitably threatn'd *Death*; tho the *Operation* of the *Acid* might be ſomewhat *impeded* through the quantity of *Oil* ſhe had taken before.

But to return to my Buſineſs, which is to ſee what are the Effects of *Oil of Vitriol*.

I confeſs the *Acid Particles* of *Oil of Vitriol* are ſo concentrated, as to make it unfit to be *externally* applied, or *internally* taken of it ſelf; but being diluted in any proper *Vehicle*, is a *Medicine* ſecond to none that I know of. A few *Drops* in *Canary* given to the youngeſt *Children* who are troubled with *Worms*, ſeldom or never fail of having the deſired effect. It being mixed with *Honey* of *Roſes*, is one of the beſt Medicines that perhaps is known for the *Scurvy* in the *Gums*, breeding *Fleſh* where it is wanting, and

and faſtening the *Teeth.* Being mixed with *Spring-water* and *Brandy*, of each equal parts, to a moderate *Acidity*, is no deſpicable Medicine, in giving eaſe in the moſt *Tormenting Pains* of the *Gout*, the Part being *fomented* with it night and morning. I may be almoſt poſitive, that the *Medicine* uſed by the Ingenious *Swiſs Gentlemen* who now reſide in this *City*, and are become ſo deſervedly famous, is nothing elſe but a mxture of *Oil of Vitriol* with a certain *Oleaginous Body*, in due proportion. The ſame *Medicine* is alſo uſed and ſold by Mr. *Fiſher*, *Chirurgeon* in *Alderſgate-ſtreet:* Which *Medicine* rarely fails giving immediate *Eaſe* in the moſt *tormenting Pains* of the *Gout.* Which is a Confirmation of the Truth of what I have ſaid in my *Eſſay* concerning the *Gout*, wherein I aſſert, that it is not from any *Acidity* in the *Blood* that the *Gout* is occaſioned, but from *Particles* of a quite contrary nature, *viz. Alkalious* ones; as plainly and evidently appears by *Analyzing* the *Chalky Subſtance* contained in the *Nodes.*

[In my *Tract* of the *Gout* I have given an account of the *Preparation* of the foreſaid *Remedy*, which is a very *wonderful* one, altho its *Preparation* be moſt eaſy.]

A better general *Medicine* than *Oil of Vitriol* is ſcarce known in moſt continued *Fevers*; any ſmall *Liquors*, as *Barley-water*, *Small Beer*, &c. being well impregnated with it, and drank freely.

[I have taken a little *pains* to *tranſcribe* what *Honeſt* Mr. *Kemp* in his *Treatiſe* of the *Peſtilence*, has ſaid concerning the *Virtues* of *Vinegar*: *Oil of Vitriol* being another of his *Favourite-Remedies* in the cure of that *worſt* of *Diſtempers*, I ſhall alſo trouble you with a little of what he ſays concerning that.

Take ſome *Spring-Water*, and put it into a *freſh Glaſs*, and *drop* ſome *Oil* of *Vitriol* or *Sulphur* into it to make it *ſharp*; then ſweeten it with *Sugar*, and drink it, both as a *Preſervative* againſt a *Fever* or the *Plague*, and as a *Medicine* and *Julep* in time of *Sickneſs*; and let me tell you, that plain *Spring-Water* and *Oil of Vitriol* or *Brimſtone*, is a better *Julep* in the *Plague*, *peſtilent*, *malignant*, and other *burning Fevers*, than almoſt any other *diſtilled Water* without it.

Note, that it is a *vain* and *ſcrupulous* Error, to take when you are *dry* and *burning hot*, but *two* or *three Spoonfuls* of *Julep* at a time. I never denied my *Patients Drink* in the *Heat* of a *Fever*, but let them drink *Julep* as much as they pleaſe; for a *little Julep* doth but *little good*, and rather encreaſeth the *Heat*: as the *pouring* of a *little Water* upon a *Smith's Fire* doth make it *flame* the more, and *burn* the *hotter*; whereas a great deal doth quite *extinguiſh* and *put* it *out*.

And becauſe this *Oil of Vitriol* is ſo *excellent* and *uſeful* a *Remedy* mixt with *Water*, in this and all *hot Diſeaſes*, I ſhould adviſe every *Ingenious Perſon* that lives in the *Country* never to be without it.

Theſe

These *Oils* you must understand, cannot be taken by themselves, but with *Spring* or *distilled Waters*; and you must be careful of *spilling* any *Drop* on your *Clothes*, for it will *fret* and *make* a *hole* in them. Now if you refuse to meddle with them for fear of receiving any *hurt*, you may as well do so by *Fire*, which you must not sit by, lest a *Spark light* on your *Apron*; neither must Men *take Tobacco* for fear of *burning* their *Faces*: And yet I must tell you, it is better to have a *Spot* on your *Gown*, or a *Hole* in your *Clothes*, which the *negligent slabbering* of it may occasion, than a *Purple* in your *Skin*, or a *Botch* or *Carbuncle* in your *Flesh*, which the discreet taking of it will hinder.

Minderarus in his Book of the *Pestilence*, where he treats of *Oil of Vitriol* and *Brimstone* (which are much the same) saith, There is no *Putrefaction*, whose *Strength* it doth not *break*, no *Infection*, which it doth not *overcome*, no *depravation* of *Humours*, which they do not *rectify*. In truth, if I may speak freely, if I should be *hindred* or *forbid* the *Use* of *Oil of Vitriol*, I would never come to the *Cure* of the *Plague*; or if I did come, I should come *disarmed*.

Mr. *Kemp* wrote his *Book* of the *Plague* for the *benefit* and *advantage* of the *Poor*, in the Year 1665, being the time when that *dreadful Distemper* raged in this *City*.]

The following *Mixture* is a very noble *Medicine* in that painful *Distemper*, the *Stone* in the *Kidneys*.

Take

Take of Oil of Bitter-Almonds one Ounce, Oil of Vitriol two Drams, Oil of Saſſafras a Scruple; mix them very well: then add Spirit of Wine rectified three Ounces; digeſt two or three days in a gentle heat. The Doſe is a ſmall Sweetmeat Spoonful in Old Hock, or Infuſion of Juniper-Berries, once in four hours, during the Paroxiſm.

Given for a Month or ſix Weeks [firſt in the Morning, and laſt at Night] in an Infuſion of Lavender Flowers, is an admirable Medicine in Epilepſies.

I could mention a great many *Caſes* more in which this *Medicine* is of ſingular uſe; but in ſo doing I ſhould ſwell this *Appendix* to too great a bulk.

I ſhall next compare the *Teſtacea*, ſuch as *Pearl*, *Coral*, *Crabs Eyes*, &c. with *natural Balſams* and *Gums*, ſuch as *Balm* of *Gilead*, *Tolu*, *Peru*, &c. *Gum Ammoniacum*, *Galbanum*, &c.

As for *Pearl*, *Coral*, and *Crabs Eyes*, I know not that they are of any uſe at all being *externally* applied; and being *internally* taken, no body that I know of pretends that they are uſeful any further than to abſorb the *Acidity* of the *Stomach*, where people labour under any *Indiſpoſition* that is attended with an *Acidity* there. But they are ſo far from being uſeful in that caſe, that I have ſcarce known them uſeful to any one that has taken them upon that ſcore: And in any other caſe they have not the leaſt ſhew of being at all *uſeful*, but *frequently* do a great deal

deal of *miſchief*, as I have obſerved in my *Eſſay* upon the *Small-Pox*, &c.

Here give me leave to mention a ſhort *Caſe* related to me by my *worthy Friend* Dr. *Baynard*, *pertinent* to this place.

A *Merchant's Wife* of ſome Eminence in the *City* of *Briſtol*, labouring under a decayed *Stomach*, was reduced to ſuch *Weakneſs*, as not able to go, *vomiting* all ſhe took: Her *Phyſicians* ſuppoſing her *Blood* abounded with *Acids*, had from time to time loaded her *weak Stomach* with the whole Retinue of the *Alkalious Kingdom*, keeping their old *Circle*, from the *Teſtacea* to the *Volatile Alkalies*, and from thence to the *Teſtacea* again; but at laſt ſhe was perfectly cured with ſome few *Doſes* of the *Gas Sulphuris*, given in the *Bath Waters* cold, *twice* or *thrice* a *day*.

As for *Balſams*, if I ſhould take upon me to deſcribe their *Excellencies*, it would be more fit for a large *Volume* than to take any room in the *Appendix* to a ſmall *Eſſay*. What a *Noble Medicine* is *Balm* of *Gilead* in many caſes? The Excellency of which is ſuch, that *God* by the mouth of an *Inſpired Writer*, by way of alluſion, when his people were in a calamitous Condition, cries out, *Is there no Balm in* Gilead? *Are there no Phyſicians there* (to apply it)? *Why then is not the Wound of the Daughter of my People healed?* What a *Noble Medicine* is *Ammoniacum* in the moſt deplorable *Aſtma's?* the *Spirit* diſtilled from which, and an equal quantity of *Verdigreaſe*, in a naked Fire, I believe to be as *Noble* a *Medicine* as ever was uſed; nay, all the

Gums

Gums and *Balſams* freed from their *Ramous, Viſcous* parts by *Diſtillation*, become much better *Medicines* than when they are in their *Natural* ſtate.

I ſhall ſay no more of *Balſams*, for fear I outrun my bounds; but ſhall proceed to anſwer ſome Objections raiſed againſt what I have ſaid in ſome parts of my *Eſſay*.

Object. 1. You ſay that the *Scurvey* is occaſioned by too great a quantity of *Alkalious Particles* in the *Blood*, and is only cured by *Acids*. If ſo, how comes it to paſs that thoſe people that live upon nothing almoſt but highly-ſalted *Meat*, are more troubled with the *Scurvey* than other people, when you own *Sea-Salt* to be an *Acid?*

Anſwer. I own that *Seamen*, and *People* who live by the *Sea-ſide* in *Marſhy Grounds*, who for the moſt part live upon *ſalt Meat* and *Fiſh*, are more troubled with the *Scurvey* than other people: But this does not proceed from their eating a larger quantity of *Salt* than other people, but from their eating more *Fleſh* and *Fiſh* than other people do, which abound with *Alkalious Particles*, and from the moiſtneſs of the *Air* about them, which hinders their free *Perſpiration*. As for the *Sea-Salt*, which is in great quantities mix'd with their Food, that is all or moſt part of it ſoon carried off by *Urine*, and with it ſome of the *Alkalious* ones alſo, and thereby frameth an *Armoniack Salt*, which it is well known the Urine of ſuch Perſons abounds with: Now what

what we call *Sal Armoniac*, is only a mixture of *Volatile Alkaly* and *Sea-Salt*. But the *Pores* being ſhut by reaſon of the moiſture of the *Ambient* Air, the *Volatile Alkaly* which ſhould be diſcharged either by *inſenſible Tranſpiration* or *Sweating*, being pent in, cauſes all the *Symptoms* complained of by thoſe Perſons. To confirm the truth of which, it is well known, that *Seamen* at *Sea*, or thoſe people who live in *Marſhy Grounds*, will ſcarce be made to *ſweat* by the moſt violent Labour. Now all people who have been ſo curious as to taſte *ſweat*, do very well know that it hath an *Alkalious*, and not an *Acid Taſte*: ſo that *Sweating*, or free *Tranſpiration* being hindred, the *Blood* muſt neceſſarily abound with too great a quantity of *Alkalious Particles*; all thoſe that ſhould have been diſcharged by the *Cutaneous Glands* being kept in it. And ſo I hope this *Objection* is anſwered.

Object. 2. In your *Eſſay*, p. 80. *1ſt Edit.* you allow that *Acids* in ſome *Diſtempers* do exorbitantly abound in the *Stomach*: Now how comes it to paſs, there being ſo great a quantity of *Acid* in the *Stomach*, that the Blood and other Juices ſhould be deſtitute of *Acidity*; there being no other way to convey any thing into the *Blood* or *Juices*, but through the *Stomach*; and therefore whatever the *Stomach* abounds with, one would think muſt neceſſarily be imparted to the *Blood* and other *Juices*?

Anſ. I have before obſerv'd, *Nov. Lum. Chyr.* p. 3, 4. *1ſt Edit.* That there is no *Innate Ferment* in

in the *Stomach*, but that the *Menſtruum* made uſe of to diſſolve our Food, and to turn it into a *Nutricious Juice*, is the *Liquor* that by chewing of our *Meat* is ſqueezed out of the *Glands* of the *Mouth* and parts adjacent, which by numerous *Experiments* does appear to be an *Acid*. Nay, all or moſt of the *Noble Menſtruums* I know of, either in the *Animal*, *Vegetable*, or *Mineral Kingdoms*, are *Acids*. Now the Food being conveyed into the *Stomach*, and mixed with the *Volatile Acid Liquor* of the *Glands* of the Mouth, is by means of the ſaid *Volatile Acid Liquor* diſſolved, and turned into a Subſtance fit for the *Nutrition* of our Bodies; a ſtate of *Health* being ſuppoſed.

It is very well known, that few people are troubled with an *Acidity* in their *Stomachs*, but thoſe who uſe very little exerciſe, or whoſe Buſineſs diſpoſes them to a *Sedentary Life*; and by this means the Chyle when made, for want of *Motion* and *Exerciſe*, (the Fibres of the *Stomach* alſo having loſt their *Tone*, and become lax) is not ſoon enough carried out of the *Stomach*; and lying there too long, the greateſt part of it is turned into a *Subſtance* like unto the *Ferment* which at firſt diſſolved it. All people who know the nature of *Ferments*, will readily enough agree with me in this, That it is the nature of them to endeavour the *Change* of thoſe things they are mixed with into their own *nature*.

Object. 3. But ſome will ſay, We can agree with you in what you have ſaid hitherto; but how

how will you do to clear your ſelf of your own ſeeming *Objection*, which is, that this *Acid Subſtance* ſhall be kept from being conveyed into the *Blood*, and ſo being the only Cauſe of many *Diſeaſes?*

Anſw. I have always obſerved, That thoſe people who complain of an extraordinary *Acidity* in their *Stomach*.

Firſt, They make Water often, and in large quantities.

Secondly, They are very *Lean*. And

Thirdly, They are (for the moſt part) very *Coſtive*.

All which *Symptoms* I ſhall endeavour to prove are occaſioned for want of the *Acid Subſtance* contained in the *Stomach*, being conveyed into the *Blood*.

As for the firſt *Head*, Why people who complain of an *Acidity* in their *Stomachs*, make more *Water* than thoſe who are deſtitute of it; the Reaſon I judg to be as follows:

The *ſolid Food* they eat, inſtead of being converted into that *Viſcid*, *White Liquor*, we call *Chyle* only, by means of too great a quantity of *Acid* is over-attenuated, and converted into a *Thin Limpid Subſtance*, and that in a ſhort time; which *Thin Subſtance*, by means of the *Liver* preſſing upon the *Stomach*, inſtead of paſſing into the *Small Guts* through the *Pylorus*, is ſqueezed into certain *Veſſels* which paſs from the *bottom* of the *Stomach* to the *Kidneys*, and ſo is carried off by *Urine*.

To

To prove that there are ſuch *Veſſels* which paſs immediately from the bottom of the *Stomach* to the *Kidneys*, I ſhall tranſcribe a Paſſage out of *Doleus*'s *Encyclopedia Med.* pag. 359, 360. ſpeaking of the parts affected in the *Dropſy*.

I ſuppoſe (ſays he) that *Liquid Subſtances* may be conveyed from the *Stomach* through the *Omentum* or *Cawl*, to the *Kidneys*; hence it is thoſe *Animals*, who have no *Cawl*, make no *Water*, as may be ſeen in *Birds* and *Fiſhes*. For the confirmation of which Opinion, I have diſſected many *Animals*, always taking care before the *Operation* to gorge them with large quantities of clear *Water*; and afterwards have *diſſected* them *alive*: I have found the *Stomach* as yet diſtended with the *Water*; but preſſing the *Veſſels* of the *Cawl* which lead towards the *Stomach*, which being covered over with *Fat* like unto the *Milkey Veins*, were, to my no little ſatisfaction, very *Turgid*: And foraſmuch as in a *living Body* the Pores of the *Stomach* and other *Paſſages* are always more open than in dead ones, where all things are flaggy, and fall together, therefore the ſaid *Tranſmeation* is not at all to be wonder'd at: And, which is worth taking notice of, in thoſe *Hydropical People* I have opened, I have always found the *Cawl* either *Putrid*, *Torn*, or full of *Tumours*. The following *Experiment* has alſo much confirmed me in my *Opinion*, *viz.* That there are *Veſſels* to convey *Liquid Subſtances* from the *Stomach*, through the *Veſſels* of the *Cawl* to the *Kidneys*. Not long ſince an experienced

perienced *Herniotomiſt* or *Cutter* of *Ruptures*, of *Hanover*, whoſe Name was *Wedling*, by *Section* cured a certain Perſon of an *Omental Rupture*; and becauſe a part of the *Cawl* was alſo cut away, the *Patient*, who is yet alive, does greatly complain of a difficulty in making *Water*; and if at any time he drinks any large quantity, he perceives a very great *Weight* and *Pain* about his *Stomach*, and is always looſe: hence, in my conjecture, ſome *Veſſels* which carry the *Urine* right on to the *Emulgents*, were cut, by which means all the *Drink* he *drank* was carried into the *Duodenum*, and ſo hinders the *Fermentation* that is there performed, and makes all the *Fibres* lax. From all which may be proved, that all we drink, and of conſequence all other *Subſtances* made very liquid in the *Stomach*, do not paſs through the *Inteſtines* to the *Lacteal Veins*, and from thence through the *Thoracick Duct* to the *Heart*, becauſe the *Pylorus* is reflex to the *Stomach*, leſt the *Liquid Subſtances* contained in it ſhould ſlide out: It is therefore certain that *Liquid Subſtances* lying at the bottom of the *Stomach*, do paſs through it in that part which is joined to the *Cawl*: and if theſe *Veſſels*, or the *Cawl* it ſelf, are either *lacerated*, *broken*, *putrified*, or *obſtructed* with *Oedematous Tumors*, it neceſſarily follows that the *Liquid Subſtances* contained in the *Stomach*, muſt be let fall into the *Cavity* of the *Abdomen*, and ſo a *Dropſy* is cauſed. But being free from any ſuch diſorder, *Liquid Subſtances* muſt freely paſs through them to the *Kidneys*, and ſo to the *Bladder*. I could cite other Authorities beſides my own Obſer-

vations, as Sir *George Ent*, *Charlton Waldſmiedght*, &c. but this one is I think ſufficient.

From this *Doctrine* may very great *Conſolation* be afforded to People labouring under the *Stone* in the *Kidneys* and *Bladder*; and *Induſtrious Phyſicians* need not deſpair of finding out ſuch *Medicines* as will *Diſſolve* or *Break* to pieces *Stones* contained in either of thoſe parts. One great reaſon I verily believe that has hindred Perſons from making diligent ſearch after ſuch *Medicines*, has been from a ſuppoſition that ſcarce any *Medicine* could retain its *Virtue*, but muſt be in great meaſure, or altogether deſtroyed by the many Alterations it muſt undergo, according to the ordinary Laws of Circulation; but were they fully ſatisfied (as there is no reaſon to the contrary) of this *nearer Cut*, I ſuppoſe people would not think the diſſolving *Stones* in the *Kidneys* and *Bladder*, ſo difficult a Task as it hath hitherto been thought to be.

To prove the *Exiſtence* of the foreſaid *Paſſages* for *Fluid Subſtances* from the *Stomach*, through the *Veſſels* of the *Cawl* to the *Kidneys*, and that *Medicines* may paſs unaltered to the *Kidneys* and *Bladder*, I ſhall inſert a couple of *Caſes*.

One Mr. *Bradford*, an Eminent *Tradeſman* of *Worceſter*, ſent to me one Afternoon, deſiring me to make all poſſible haſte, for that he was upon the Wrack: When I came to him, I found him in a moſt dreadful condition, he not having made *Water* for two Days, and ſuch an *intolerable Pain* in his *Back*, that he was not able to ſupport himſelf under it. I preſently gave him ſome *Medicines*, ordering him to take them in large

large quantities once in *half* an *hour*: In an *hour* and *half's* time at fartheſt, he ſent to me to acquaint me that he was well, and at eaſe, having piſs'd two large *Chamber-Pots* full, which held at leaſt *two Quarts* apiece; and in the firſt *Pot-full* above *two Large Spoonfuls* of ſmall *pieces* of *broken Stones*. He ſeveral times ſince, occaſioned by *hard Drinking*, has been under the ſame *Circumſtances*; and upon taking the ſame *Medicines* has found immediate *Relief*. Now had theſe *Medicines* been conveyed from the *Stomach* to the *Small Guts*, and from thence by the *Lacteal Veſſels* to the common *Receptacle* of the *Chyle* in the *Meſentery*, and ſo on to the *Blood*, and from thence be ſeparated by degrees in the *Kidneys*, as it is brought there by the *Emulgent Arteries*, it had been altogether impoſſible that the Effect could have been ſo ſudden, and that the *Medicines* ſhould not have been greatly altered, or totally deſtroyed, by the many changes they muſt have undergone before they could come to the Part affected. But by the way I have been ſpeaking of, the *Medicines* might all of them, and that without being in the leaſt impaired in their *Virtue*, be tranſmitted to the Part affected, and ſo perform their *Operations* in breaking to pieces the *Stone* or *Stones* they met with, either in the *Kidneys* or *Bladder*.

Mrs. *Wheatly*, a *Glaſier's Wife* without *Smithfield-Bars*, had a long time been afflicted with the *Stone* in the *Bladder*, and for about *Nine Months* had confined her ſelf to her Chamber; the *Miſery* ſhe underwent being ſuch, that made her altogether uncapable of any buſineſs; and

of ever being *delivered* ſhe was perfectly in *deſpair*, all common means having in vain been uſed: at laſt by ſome means or other ſhe was prevailed with to ſend for me: When I came to her, ſhe gave me a moſt *lamentable Account* of her *Caſe*; and altho I gave her all the *Encouragement* imaginable, yet all that I could ſay made but little *impreſſion* upon her, ſhe ſuppoſing her *Condition* to be ſo *deplorable*, that to expect *Deliverance* was *Vanity* in the higheſt degree: however, ſhe was at laſt prevailed upon to try what I could do for her. I began to give her ſome *Medicines*, which ſhe took in large quantities, and repeated them once in *four hours*: It was upon a *Monday* morning ſhe began to take them, and on the *Wedneſday* night next following I examined her *Water*, and found ſome ſmall *ragged Pieces* of *Stone* in it; and taſting the *Water*, I could diſcern the *Taſte* of the *Medicines*, which were *Salino-ſulphureous* ones, to be as *vigorous* altogether, as they were before ſhe had taken them into her *Mouth*, and not, as I could diſcern, in the leaſt altered in their taſte. On the *Morrow Morning*, being *Thurſday*, by *Five a Clock* ſhe ſent her *Maid-Servant* to me, to my Houſe in St. *Martins-lane*, to acquaint me that ſhe was delivered from her *Miſery*, and perfectly well. About Eight a Clock I went to viſit her, and found a *Stone* that ſhe had voided with little *Pain*; the *Medicines* having acted upon the *Sphincter Muſcle* of the *Neck* of the *Bladder*, and ſo relaxed it, as to make it give way for the *Stone* to paſs: The *Length* of the *Stone* was an *Inch* and *half* and half a quarter; it was three Inches and half round

round one way, and two Inches and a half another. There were ſome ſmall *Flaws* in it, which were made by thoſe little *ragged pieces* which came away the *Night* before, which I found in the *Chamber-Pot*. The thing was ſo extraordinary, that it came to the Ears of her late *Majeſty*, who deſired to ſee the *Stone*, which I procured for Her; and ſhe was pleaſed to ſay, *That it was the moſt Extraordinary Thing She had ever ſeen or heard of, to be brought away without Cutting or Inſtruments*. Any one who doubts the Truth of this *Relation*, may yet ſee the *Stone* at Mrs. *Wheatly*'s, who carefully preſerves it: The *extraordinary Veracity* and *Integrity* of the *Perſon* is ſuch, that I am ſure ſhe would not tell an *Untruth* to do any Man ſervice.

I could give ſeveral other *Inſtances* of this nature; but theſe Two are, I think, ſufficient, and a plain *Demonſtration* that there are *Veſſels* which carry *Fluid Subſtances* immediately from the *Stomach* to the *Kidneys*, without thoſe many *Circumgyrations*, that people generally imagine: nay, I do not queſtion but ſuddenly to make it appear by *Ocular Demonſtration*, which if I could not do, yet to people who are not meer *Sceptieks*, *Demonſtrations* deduced from reiterated *Experiments* will be ſufficient.

[As a farther *Confirmation* of the *Exiſtence* of theſe *Urinary Paſſages*, I ſhall preſume to add a *couple* of *Relations* I had from *Dr. Yarborough* of *Newark* in *Nottinghamſhire*.

" I was (ſays the *Doctor*) ſent for to a *Gentle-*
" *man* who lived at ſome diſtance from me,

 " who

" who for a conſiderable time had laboured un-
" der an *Aſcites*, his *Abdomen* being diſtended
" prodigiouſly, and had all the *Symptoms* of a
" true *Aſcites*. The *firſt Night* I came to him I
" gave him a very *large Doſe* of *Tartarum E-*
" *metticum* (for by the way, common *Doſes* of
" *Emetticks* won't work at all with *Hydropical*
" *People*) and ſate by him to ſee it perform its
" Operation: after I had ſate near *two Hours*,
" and my *Patience* almoſt *tired*, he told me,
" that he was confident that there was a *Miſ-*
" *take*, and that I had given him a *Cordial* in-
" ſtead of a *Vomit*; to which I replied I was
" ſure of the contrary, that the *Medicine* was
" right and good in its kind: About *half* an
" *hour* after he called for a *Chamber-Pot*; but
" inſtead of *vomiting*, he *piſſed* a *quart* or *two*,
" and before the next *Night* he had diſcharged
" all the *Water* that was contained in his *Ab-*
" *domen*.

The *ſecond Relation* was of a *Maid* who was under the ſame *Circumſtances* with the before-mentioned *Gentleman*; to whom, inſtead of *Tartarum Emetticum*, he gave a very *large Doſe* of *Infuſion* of *Crocus Metallorum*, which had the ſame effect upon her as the *Tartarum Emetticum* had upon the *Gentleman*.

Theſe *Relations* were made before Dr. *Baynard* and ſeveral other *Gentlemen*, the truth of which he did affirm with all the *Solemneſs* imaginable.

I confeſs an *Aſcites* is one of the *ſtubborneſt* and moſt *difficult Diſtempers* to be overcome of any I know; and I ſhould be heartily glad, for the

ſakes

ſakes of thoſe *miſerable People* who are afflicted with it, that the forementioned *Method* would always have the ſame ſucceſs; which Dr. *Yarborough*, through the whole courſe of his *Practice*, never ſaw it have, only in the *two Perſons* here mentioned. However it ſeems to me impoſſible that theſe Perſons could have been ſo ſuddenly relieved, had there not been a more *immediate Paſſage* for the *Water* contained in their *Abdomens*, than by the ordinary *Ways* of *Circulation* through the *Blood-Veſſels*; and the reaſon of Dr. *Yarborough*'s relating theſe *Caſes* to me, was to confirm me in my *Opinion* of thoſe nearer *Paſſages*.]

The *Learned* and *Ingenious* Dr. *Baynard*'s Account he gives of the ſudden Effects of *Vinegar* before-mentioned, in a total *Suppreſſion* of *Urine*, is alſo a good Argument to evince the *Truth* of what I have been here ſpeaking. But to proceed to my Second Head, which is,

That thoſe people who abound with an *Acidity* in their *Stomachs*, are generally very *Lean*.

To prove which *Poſition*, will be no very difficult Task; for the *ſolid Food* they eat (and generally they have good *Appetites*) which is that which affords moſt *Nutrition*, being over-attenuated, is by that means made capable of paſſing through thoſe *Veſſels* I have before mentioned (which I ſhall preſume to call *Urinary Veſſels*) the more groſs parts only being conveyed to the *Small Guts*; which having but few *Nutritious Particles* in them, can afford but very

little *Nouriſhment* to the parts; and the parts being deſtitute of their uſual and neceſſary *Nouriſhment*, *Leanneſs* of conſequence muſt follow.

A ſufficient Argument to prove that *Leanneſs* proceeds from the want of a ſufficient quantity of *Acid Subſtances* in the *Blood*, is this; That *Fat* is nothing elſe but a *Concrete*, produced from the Mixture of the *Acid* and *Oily Parts* of the *Blood*: Now the *Blood* hath never any *Acid* in it, (at leaſt not to abound in it) but when people are in a perfect *ſtate* of *Health*: and when at any time the *Blood* is deſtitute of a ſufficient quantity of *Acid Particles*, and abounds too much with *Alkalious* ones, (which argues a *Morbid* ſtate) as it doth in all thoſe people who have too great a quantity of *Acid* in their *Stomachs*, which upon *experiment* any man may find to be true, altho at firſt ſight, I confeſs, it looks very like a *Paradox*. Now the *Blood* being deſtitute of a ſufficient quantity of *Acid Particles* to *coagulate* the *Oily* ones, there can be no freſh Production of *Fat*; and that already generated having its *Acid Particles* mortified by the great quantity of *Alkalious* ones, preſently loſeth its conſiſtence, and is again converted into a *thin Oil*, which is ſoon carried off by ſome of the *Emunctories*, there being nothing in the *Blood* fit for it to incorporate or mix with; and when theſe *Oily*, *Fat Particles* are gone, then the *Corroſive*, *Alkalious Particles* prey upon the *Muſculous Nervous Fibres*, and ſo cauſe general *Diſorders*: at other times when they are in great quantities thrown upon *particular Parts*, according to the nature of the part affected,

affected, they cauſe different *Diſeaſes:* But I don't know any one *Diſeaſe* cauſed by *Acids*, unleſs it be over much *Fatneſs*, and what we call *Heart-burn*, if they are to be accounted *Diſeaſes*, the moſt *healthy People* being ſubject to the *Heart-burn*; tho the *Heart-burn* is as often cured by *Acids*, ſuch as *Ol. Vitriol. Dul.* &c. as by *Alkalies:* From whence I conjecture, that the *Heart-burn* alſo may be occaſioned from the *Blood*, which is brought to the *Coats* of the *Stomach*, abounding with too great a quantity of *Alkalious*, *Corroſive Particles*, which may *vellicate* and *contract* the Part. Having in ſhort diſpatch'd this Head, I ſhall proceed to my *Third.*

That thoſe who abound with an *Acidity* in their *Stomachs*, are for the moſt part very *Coſtive.*

From the ſame reaſon that people abounding with an *Acidity* in their *Stomachs*, are *lean*, it is that they are *Coſtive* alſo; the more *thin*, *fluid Subſtances* being carried off by the *Urinary Veſſels*, and only the more *groſs* ones conveyed into the *Guts*, and for want of a ſufficient quantity of *Moiſture*, the *Excrements* are *over-hardned*, and the *Guts* not ſufficiently *lubricated*; and therefore *Coſtiveneſs* muſt neceſſarily follow.

But after all, I foreſee another *Objection* will be raiſed; and therefore to make every body eaſy, I ſhall lay down the *Objection*, and endeavour to anſwer it.

Objection. If the *Acidity* in the *Stomach* be the *Cauſe* of the *ſolid Food* we eat being *over-attenuated*, and ſo the *Nutritious Particles* being carried

carried off by the *Urinary Veſſels*, as in *Atrophies*, &c. without being conveyed into the *Blood*, to afford *Nutrition* to the parts; How comes it to paſs that *Iron* or *Steel*, which you own to be an *Acid*, can be of any uſe? For inſtead of being uſeful, one would think that by increaſing the *Acidity*, it ſhould *exaſperate* and *increaſe* the *Malady*.

To which I *anſwer*: I have before obſerved, that *Iron* or *Steel* cannot be conveyed into the *Blood* before it is turned into a *Vitriol*; and therefore to thoſe people who have a great *Acidity* in their *Stomachs*, it is found abſolutely neceſſary to give *Iron* or *Steel* without any *precedent Preparation*; which has been long ſince taken notice of by the *Learned* and *Judicious* Dr. *Cole*, in his *Phyſico-Medical Eſſay* concerning the late *Frequency* of *Apoplexies*. Now *Iron* or *Steel* being given *crude* and *unprepar'd*, is, by the means of the *Acid* in the *Stomach*, turned into a *Vitriol*; by which means the *Acid* is ſo *embodied*, as to make it uncapable of paſſing through the almoſt *imperceptible Urinary Paſſages*; and likewiſe by *embodying* the *Acid*, hinders it from over-much *attenuating* the *Chyle*; ſo that being mixed with the *Chyle*, they are together conveyed into the *Small Guts*, and ſo on to the *Blood*; and by its *Stiptick Acidity* it confirms the *Texture* of the *Blood*, and mortifies the *Luxuriant Alkalious Particles* it meets with.

As for what I have mentioned concerning the *Efficacy* of *Juice* of *Limons*, in immediately abating and taking off the *violent Symptoms* that attended

attended a *Perſon* who had been *bitten* with a *Viper*, after the *Volatile Salt* of *Vipers*, and other *Antidotes* had in vain been given; I find the very ſame thing taken notice of by *Hoffman*, in his *Clavis Pharmaceutica Schroderiana*, pag. 444,445.

An *Ingenious Perſon* not long ſince, who had formerly embraced the *Doctrine* of *Acids*, was willing to try what *Effects* the *Tranſfuſion* of *Acid* and *Alkalious Liquors* into the *Veins* of *Dogs* would produce; accordingly he *injected* ſome *Oil of Sulphur per Campan.* into the *Veins* of one *Dog*; which inſtead of diſordering him, made him *brisk* and *lively*, and very *hungry*: But another *Dog*, into whoſe *Veins* ſome *Oil of Tartar per Deliquium* (a known *Alkaly*) had been *injected*, it produced a clear contrary effect, the *Dog* being *lumpiſh* and *dull*, and in a few *days died*. But it is to be obſerved, that theſe two *Liquors* were ſo diluted, as to make them fit to be taken in at the *Mouth*, before they were *injected*. Something (as I remember) of the ſame nature is alſo taken notice of by *Fred. Hoffman*, *Fil. de Acido & Viſcido*.

I have been well aſſur'd from a *Perſon* of the *greateſt Honour*, That the *Jews* in *Conſtantinople* (who are the only *Phyſicians* there) adviſe their *Patients*, in times when the *Plague* rageth, to eat *Limon* and *Sugar*, and to drink *Limonade* in large quantities, and that by way of *prevention*; and thoſe people who do ſo, ſeldom or never have the *Plague*: And if at any time they are called to Perſons who have the *Plague* upon them, if they will but take the aforeſaid *Medicines* in large quantities, they very rarely miſcarry.

From

From many late *Obſervations*, I am fully convinced, that the *Gout* is without any great difficulty to be *cured*, or at leaſt a *Fit* to be taken off in a ſmall time, by a proper *Courſe* of *Acid Medicines*, both *internally* taken, and *externally* applied to the *Part affected*, and that without the leaſt Inconvenience afterwards: And I am altogether certain, that the only reaſon why people have hitherto ſo *fruſtraneouſly* attempted the *Cure* of the ſaid *Diſtemper*, has been from the general Prejudice they have had againſt *Acid Medicines*, which are the only things capable of doing ſervice.

Tho I do ſo mightily contend for the Uſe of *Acids* in general in the *Cure* of *Diſeaſes*, yet I do not in the leaſt pretend that any one *Acid* is capable of anſwering a *Phyſician's* Intention in the *Cure* of all *Diſeaſes*: Neither *Vinegar* nor *Limons* are to be reckoned *Panaceas*; tho, for ought I know, in the hands of a *Perſon* who well underſtands their uſe, they will either of them do more than many of the *celebrated Panaceas*.

No Man is fit to be called a *Phyſician*, who does not well underſtand the *Nature* of *Diſeaſes*, and of the *Juices* contained in a *Human Body*, which is what hitherto hath been but little enquired into; Men taking up with general *Notions* that had no *Foundation*, which has been the only reaſon that *Phyſick* hath been ſo long *practiſed* without the leaſt certainty; *Phyſicians* changing the *Method* of their *Practice* almoſt as often as we do that of our *Clothes*. Being extremely well skill'd in the *Anatomy* of the *Solid Parts*, is a *Noble Qualification*, and enable

enables a Man to talk finely; but does not in the leaſt tend to enable Men to *cure Diſeaſes*. It is an exact *Skill* in the *Anatomy* of the *Juices*, the *Fluid Parts*, that will make a Man a good *Phyſician*; but in this ſort of *Study* few have been converſant. An exact Knowledg of the *Materia Medica* in general, and the *Specifick Differences* there are between thoſe *Medicines*, ſeemingly of the ſame *Tribe*, is alſo an abſolutely neceſſary *Qualification*: For that *Acid* that will cure a *Fever*, may not cure the *Gout*; and that which will cure the *Gout*, will not perhaps, cure another *Chronical Diſtemper*; there being a vaſtly wide difference between thoſe very *Medicines* which are ſeemingly the ſame.

I do poſitively affirm, That neither *Blood*, nor its *Serum*, being any way that I know of expoſed to *Putrefaction*, will by that means in the leaſt become *Acid*, but rather more *Alkalious*: Now *Acids* in general hindring *Putrefaction*, and likewiſe reducing things from a ſtate of *Putrefaction* that are already become *Putrid*, muſt be the great *Medicines* to cure *Diſeaſes*; for there is no *Diſeaſe*, but what proceeds from ſome ſort of *Putrefaction* of the *Fluid Parts* of our *Bodies*.

What I have ſaid in my *Eſſay*, and alſo in this *Appendix*, has been only in *general terms*; but I am now reducing all to a *Method*, I deſigning my *Hiſtory* of *Blood* to be alſo a *Methodical Hiſtory* of *Diſeaſes*, with an account of the *Medicines* proper to be uſed in the *Cure* of them: I being reſolved to ſerve my *Generation*

to

to the utmoſt of my *Power*, let my *Treatment* be what it will.

I ſhall conclude this *Appendix* with *Two* or *Three Caſes*, and the *Method* I uſed in the *Cure* of them, as a *Confirmation* of the *Truth* of what I have ſaid concerning ſome things in my *Eſſay*.

Caſe the Firſt.

A *Gentleman*, who had long laboured under a *Sciatica*, viz. *two* or *three Years*, and had applied himſelf to ſeveral *Phyſicians* of the greateſt *Eminence* for *Advice*, and had by their *Preſcriptions* been loaded for that whole time with *Alkalious Medicines*, without receiving the leaſt advantage; the *Leg* and *Thigh* of the *Left Side* being greatly *emaciated*, and a very large *Glandulous Tumor* on his *Hip*: He was never free from *violent Pain*, and very *lame*. I firſt of all *purged* him well for about a *Fortnight* with *Calamel. Tart. Vitriolat.* and *Rezin of Jallap*: I afterwards gave him the following *Medicines*, which he took conſtantly *three times* a *day* for about *ten Weeks*; in which time, without any *external Application* at all, his *Pain* left him, the *Tumor* diſappeared, and his *Leg* and *Thigh*, which were before *waſted* to mere *Skin* and *Bones*, became equally *plump* and *fleſhy* with the other.

℞ *Cinnabaris Antimonii, vel (quod melior eſt) Factitiæ Com. Officinarum recenter levigat. Unciam unam. Gum. Guaiaci Dracmas ſex. Conſ. Cynosbati Uncias tres. Syr. Sambuci q. ſ. f. Electuarium. Doſis eſt quant. Nuciſ-*

Nuciſmoſcatæ ter in Die, Horis Medicinalibus, ſuperbibendo Uncias Octo Infuſionis ſequentis.

℞ *Rad. Bardanæ Siccat. & groſſè Contuſ. Uncias octo. Baccar. Juniperi, Uncias quatuor, ſem. Bardanæ, Fraxini, ana Unciam unam ſemis. Saſſafras Unciam unam. Tartari Vitriolati Dracmas tres. Aq. Font. Libras ſex. Infunde clauſè & calidè per horas* xii. *& coletur, colaturæ ſing. Libris duabus. Adde Sp. Liq. Guaiaci Rect. Unciam Semis. M.*

This *Method* I have ſo often experienced in this *Caſe*, that I dare *recommend* it as to be generally depended upon.

Caſe the Second.

A *pretty young Gentleman*, who had been too free with the *Fair Sex*, by his over-frequent *Embraces* was *poxt* to the higheſt degree, being *Leprous* from the *Crown* of his *Head* to the *Soles* of his *Feet*, and all other *Symptoms* of the moſt *confirmed Pox* I ever met with. He was altogether averſe to *Salivation*; I therefore gave him the aforeſaid *Medicines*, which he took *three times* a *day* for about *two months*; but I firſt of all purg'd him very well with *Calamel. Tart. Vit.* and *Rezin. Jallap.* and for the laſt *Fortnight* ſent him to the *Bagnio three times* a week, ordering him to take a *large Doſe* of the *Electuary* and *Infuſion* about an *hour* before he went into

into the *Bagnio*. At the *two months* end he was perfectly freed from his *Leproſy*, and his *Skin* as *clean* and *white* as ever I ſaw any one in my life; and all other *Symptoms* that attended him were perfectly vaniſhed.

Caſe the Third.

A *Corporal* in the *Right Honourable* the *Earl* of *Oxford*'s *Regiment*, was *pox'd* to the higheſt degree; upon which he applied himſelf to a *Phyſician* near *Chelſey*, who put him into the *powdering Tub* of *Affliction* three times; and altho he had each time undergone a *Regular Salivation*, his *Symptoms* were not in the leaſt abated. He was *emaciated* to ſuch a degree, that he was like a meer *Skeleton*. He had *violent Pain* in his *Head*, *Shoulders*, *Arms*, *Thighs*, and *Shin-bones*; and when he was warm in his *Bed*, the *Pain* was ſo exaſperated, that altho he was ſo weak as to be ſcarce able to ſtand, yet out of his *Bed* he was forced to get, and *crawl* about in the *cold*, which afforded him ſome ſmall *Relief*: his *Appetite* was quite loſt, and a continual *Hectick* upon him. To be ſhort, I think I never ſaw ſo *miſerable* a *Spectacle* in my whole life. To this *Man* I gave the *Electuary* and *Infuſion* three times a day, which ſoon abated the *violence* of the *Symptoms*; and continuing the uſe of them about *three months*, altho he had ſeldom leſs than *four* or *five Stools* a day, yet he gather'd *Fleſh*, and in that time became a *hale hearty Man*, to the great ſurprize of all who knew him. I may be poſitive that it was not

not above *ſix weeks* before he was able to walk about his buſineſs.

I have given theſe very Medicines to, I believe, *two hundred People* in ſeveral *Chronical Diſtempers*, with extraordinary ſucceſs: And altho in the day-time they ſeldom fail of *working three* or *four times* by *Stool*, and in the night provoking *Sweat*; yet I have ſcarce known any one perſon who has taken them, that during the very time they are taking them, for all the very great *Evacuations* they cauſe, have not ſenſibly gather'd *Fleſh*, and if weak, recover'd *Strength*. Whereas let the ſtrongeſt perſon take any of the *common Purgers* but a *month* together; and altho they have not above *two* or *three Stools* a day, yet they will *emaciate* them, and weaken them to a great degree: which is a very great Argument of the excellency of *Cinnabarine Medicines* mixt with *Gum Guaiaci* above the *common Purgers*; the one carrying off the *Nutritious Juices*, as well as the *Excrementitious* ones; the other only cauſing a due *Secretion* of the *Noxious Excrementitious Juices*: which by ſo doing, Nature is thereby rid of any *Load* wherewith ſhe is *oppreſſed*, and enabled to apply the *Nutritious Juices* to the ends they are deſigned for.

I have in ſome *extraordinary Caſes* given above a *pound* of *Cinnaber* at times to one perſon, and never knew the leaſt ill *Symptom* follow, nor ever once to excite *Salivation*. And I do verily believe, that in the hands of a perſon who knows how to uſe it, it is one of the *greateſt Medicines* in *Chronical Diſeaſes* in the

World; but being uſed with *Gum Guaiaci*, and *Spiritus Guaiaci Rect.* it does much better than alone, they greatly aſſiſting it in its *Operation*. Being mixed with proper *Cephalicks*, and taken for ſome time, it is a wonderful *Medicine* in *Epilepſies*, and ſome other *Nervous Diſtempers*. *Hoffman* has wrote a whole *Treatiſe* of *Cinnaber*; and I am capable of ſpeaking ten times more in its praiſe from my own *Experience*, than *Hoffman* hath done.

Convulſions are *Diſtempers* that *Children* are frequently troubled with, more of them dying of *Convulſions* than of all other *Diſtempers*. *Teſtaceous Pouders* are the *Medicines* generally given, as the great *Aſylum* to which *Phyſicians* fly, but very rarely with Succeſs. But upon the giving them *temperate Acids* [mixed with proper *Cephalicks*] I have generally found them to anſwer my Intentions.

I was, not long ſince, ſent for to a *Child* who had *Convulſions* to ſuch a degree, that his *Parents* believed it to be an *Epilepſy*. His *Belly* was *hard* like a *Stone*, and he had continual *Tortions* and *Convulſive Contractions*, ſometimes of his *Hands* and *Arms*; ſometimes his *Legs* and *Thighs* would be diſtorted, and almoſt put out of *Joint*; ſometimes he had the moſt violent *Vomitings*, and at other times the *Muſcles* of his *Face* would be ſtrangely *contracted*. I gave it the following *Medicines*, and in about *two days* he was perfectly free from his *Convulſions*, and in a fortnight's time perfectly well.

℞ *Tart. Vitriolati Dracmam unam.*
Crem. Tart. Dracmas duas.
Caſtorei Dracm. ſemis.
Sacchari albi Unciam ſem.
M. f. Pul. in viii *Chart. diſtribuend. ex quibus cap. nº* 1. *quartâ quâque horâ in Cochlear. Julap. ſeq. ſuper bibendo Cochlear. Tria vel quatuor ejuſd.*

℞ *Aq. Roriſmarini, Pulegii, ana Uncias tres.*
Peon. Comp. Uncias duas.
Ol. Vitrioli Dul. Scrupl. unum.
Syr. Peoniæ Dracmas tres.
M. f. Julap.

℞ *Ol. Amygdalar. Amar. Unciam unam.*
Ung. Dialtheæ Uncias duas.
Ol. Aniſi, Pulegii, ana gut. vi.
M. f. Linimentum, cum quo illinatur Regio Umbilicalis Mane & Veſperi, ſuperponendo Pannum Laneum ter duplicatum.

By this *Method*, with ſome *variation*, according as different *Symptoms* appear, I have known multitudes of *Children*, whoſe *Lives* have been deſpaired of, cured of the moſt violent *Convulſions* in a ſmall time.

I have likewiſe obſerved, that in *malignant Fevers*, thoſe people who are treated according to the uſual cuſtom, with *Alkalies*, and *Alexipharmicks*, are generally attended with *violent Convulſions*: But thoſe who uſe *Acids* plentifully, are ſeldom or never *Convulſive*.

I have cured abundance of *people* of that *troubleſome Cough* that hath raged this *March*, by only giving them large quantities of *Limon* and *Sugar*, to be eaten both *day* and *night*; and giving an *Opiat* with ſome *Drops* of *Oil of Sulphur per Campan.* at night going to *Bed.*

In violent *Hyſterical Fits* in *Women*, I have frequently, without (ſeldom) failing of Succeſs, given a mixture of *two* or *three Spoonfuls* of *Vinegar*, a few *Grains* of *Caſtor*, and about a *Quarter* of a *Pint* of *Spring Water*: Which *Mixture* has frequently abated and taken off the *Fits*, when before they had been greatly *exaſperated* by *Spirit* of *Harts-horn*, *Sal Armoniac*, &c. *Gas Sulphuris* alſo given alone is a wonderful *Medicine* in violent *Hyſterical Fits*. And in the beginning of *Conſumptions*, I believe there is not a better *Medicine* than *Gas Sulphuris* given in large quantities. But the *Cortex*, which is now ſo univerſally uſed in *Conſumptions*, without the leaſt ſhew of Reaſon, I believe to be the moſt *pernicious Medicine* in *Hectical Diſtempers* that ever was given. I have enquired lately of ſeveral *Perſons*, both *Phyſicians* and *Apothecaries*, whether they ever yet ſaw a *Hectick* cured by the *Cortex*, who have unanimouſly declared they never did; and that ſcarce any one that hath taken it, but has died. I muſt declare I never yet ſaw any one cured of a *Conſumption*, but by *Acids*, ſuch as *Gas Sulphuris*, *Ol Sulphuris per Campan.* &c. by the means of which I my ſelf have cured many. But ſometimes, in ſome very *extraordinary Caſes*, eſpecially if the *Diſtemper* hath been of long ſtanding, and the *Texture* of

of the *Lungs* much ſpoiled, even *Acids* themſelves will leave us in the *lurch*, even after *Symptoms* have ſeemed to be much abated, and things have look'd with a promiſing *Aſpect*: Which I my ſelf have in one or two *Patients*, whoſe Lives have been very *dear* unto me, experieneed; which I cannot mention without the *greateſt Concern*. For all which, I dare not, even in *Conſumptions*, leave off the uſe of *Acids*, becauſe I am ſure they will do more than any other beſides; and there are no *Medicines* whatſoever, that will make people *Immortal*. I have my ſelf cured many with *Acids*, but never could yet ſee or hear of one that was ever cured without them.

[By the uſe of proper *Acids* I have very rarely fail'd of *curing* the following *Diſtempers*, ſome of which are accounted amongſt the number of the moſt difficult ones; and if ever I can find time for ſuch a Work, I will give a diſtinct account of the cure of each of them.]

(1.) *Hard Bellies* in *Children*, with an *Atrophy* attending them, which is very common, and ſeldom *cured* by other *Methods*.

(2.) The *Stone*, that is, to take it off (if of a paſſable *Bigneſs*) with *Eaſe*, *Speed*, and *Safety*.

(3.) *Child-bed Fevers*, of which Dr. *Willis* ſays, they are moſt difficult to be *cured* of any.

(4.) *Catarrh*, or *Defluxion*.

(5.) *Cholera Morbus*.

(6.) *Diarrhea*, and *Dyſentery*.

(7.) *Jaundice*, &c.

The wonderful Succeſs Dr. *Baynard* (whoſe intimate *Converſation* I have of late been honoured with) has had through the *Courſe* of his *Practice*, is eminently known both in *London*, *Bath*, and *Lancaſhire*, where he formerly dwelt; And his *Practice* has chiefly run upon *Acids*; which (as he hath all the reaſon in the world) he does ſtrenuouſly vindicate and defend.

It was out of a *Life-ſaving Principle* that this Gentleman embraced the *Doctrine* of *Acids* in oppoſition to the *Multitude*; who for want of this Knowledg, daily record their ſad *Cures* in *Sextons Books*, and the *Weekly Bills*: And I dare ſay, that he has wrought more Subſtantial Good Cures, than any one beſides him, who has acted upon different Principles.

I don't find that the Method of making the *Gas Sulphuris*, which is a Medicine I have often mentioned, is any where ſet down; I ſhall therefore give an account of its *Preparation*, which tho a very *eaſy one*, is for all that a very *Noble Medicine*.

Gas Sulphuris.

Put into a large *Glaſs Receiver*, that will hold *ſix* or *eight Gallons*, about *four Quarts* of pure *Spring-Water*; when you have ſo done, burn in the *Receiver* a *Quarter* of a *Pound* of pure *Sulphur Vivum* made into *Matches*: You muſt take care that your *Matches* be very long; ſo that when they are lighted, the *Flame* may be as near the middle of the Body of the *Receiver* as may be. By that time you have burnt *three* or *four Matches*, the *Receive*

ceiver will be ſo full of the *Steams* of *Brimſtone*, that when the lighted *Match* is put into it, it will be immediately *extinguiſhed*; you muſt then ſtop the *Mouth* of the *Receiver* very exactly with a *wet Cloth*, and let the *Steams* condenſe: when you ſee the *Receiver* clear, then burn more *Matches* till the *Receiver* is again filled with *Steams*; then ſtop up again, and repeat this work till your *Matches* are all burnt, and your Water will then be impregnated with the *Volatile Acid Steams* of *Brimſtone*.

This *Medicine* given liberally in *malignant Fevers* has done *Wonders*, even where people have been given over as dead. It is an excellent *Medicine*, being taken by way of *Prevention*, in *Infectious Seaſons*. And I think, if any *Medicine* deſerves that Name, this doth deſerve to be called the true *Prophylacticon*.

Dr. *Baynard* has another way of making the *Gas Sulphuris* ſomewhat more warm and *Alexipharmick*.

Take a large *Glaſs Receiver* with a Mouth of *three* or *four Inches Diameter*, place it *Horizontally*, into which pour *Aq. Petaſitid. Ulmariæ ſimp. Vini Rhenani, ana Libras duas*; *Aq. Rutæ, ſucci Pomorum ſilveſt. vet. ana Libram unam*; *Aq. Theriacalis, Prophylact. Sylvii, ana Uncias quatuor*: *M.* Then take an *Iron Ladle* fitted to the *Mouth* of the *Glaſs*, with a *long Handle*; put into the *Ladle half* an *Ounce* of *Sulphur vivum* poudered, accend with a ſmall *Gad* of *red hot Steel*; when lighted, clap it into the *Receiver* ſo far, that the *Fumes* may ariſe in the middle of the *Glaſs*, and the bigger the *Glaſs* the better; for the more

Fumes it contains, the ſooner will your *Operation* be over. Stop the *Mouth* with a *wet Cloth*, that the *Steams* get not out; when the *Fumes* have extinguiſhed the *Flame*, let it ſtand, that the *Oleum Sulphuris* may trickle down the ſides of the *Glaſs*, and ſubſide upon the *Menſtruum*; when the *Fumes* are ſettled, and the *Glaſs* clear, quickly draw out your *Ladle*, and repeat the Action, until it be well *impregnated* with ſtrong *Volatile Gas*. Remember always to keep the mouth of the *Glaſs* well ſtopped with the wet Cloth; otherwiſe the *Gas*, which is of a moſt ſubtile nature, will evaporate.

A *Spoonful* of this given once in *two* or *three hours*, in any proper *Julap*, doth moſt wonderfully extinguiſh *Thirſt* in *Fevers*, procure *Sweat* or *Urine* infallibly, takes off the drineſs of the *Tongue*, temperates and cools the over-heated *Bile*, and procures *Reſt*. Alſo mixed with a little *Claret-Wine*, and a *Drop* or *two* of *Oil* of *Cinnamon*, does, to a miracle, ſtop *Vomiting*; and is the beſt *Peptick* for a *weak* and decayed *Stomach*.

Note, That when the *Gas* is quite gone and flown off, the *mixture* will notwithſtanding remain *ſowr*, as impregnated with the *Oleum Sulphuris*; but the *Gas*, which is the better part, will in time be loſt (it is ſo ſubtile) even almoſt through the *Pores* of the *Glaſs*. You muſt dip the *Cork-end* of the *Bottle* in melted *Brimſtone*, and keep it always *immerged* in cold *Water*. But the beſt way to keep it is in ſmall *Glaſſes*, and open no more at a time than you uſe, it loſing its *volatile Parts* very much every time the *Bottle*, in which it is kept, is opened.

As

As a further *Illuſtration* of the *Doctrine* of *Acids*, I ſhall add an account I received from Dr. *Oliver*, one of the *Phyſicians* of the Fleet, about the uſe of *Beveridg*.

Beveridg is a *prickt*, *ſowr*, *Spaniſh Wine*; one *Hogſhead* of this mixed with three *Hogſheads* of *Water*, makes the Drink the *Sailers* are allowed to drink *ad libitum*.

By my Experience in the *Fleet*, thoſe *Ships Crews* who drank this *Acid Liquor* for their common *Drink*, were much *healthier* than thoſe who by their obſtinacy would not be brought to it; as for Example:

The *Royal Oak* a *third Rate*, carrying about 500 men, whoſe *Ship's Crew*, by *Admiral Nevil*'s particular Order, began firſt to drink *Beveridg*, (he having had experience of it two years in the *Mediterranean* in the *Crown*, in all which time he loſt not above two men) and in *three months* time I don't remember, I had three *Complaints*; tho at the ſame time, in other Ships where they drank no *Beveridg*, *Fevers* and *Fluxes* were very frequent. Here I ſhall inſert one thing worthy of Note, That the *Royal Oak* wanting *Beveridg*, and being obliged to drink *Water* only, in a few days time they grew very ſickly, and loſt above 30 men in a month; inſomuch that the men themſelves were ſo ſenſible of the advantage they had by drinking *Beveridg*, that they heartily deſired they might drink nothing elſe but *Beveridg*, and begg'd it wherever they could find it. The like experience I had of the *Eagle*, *Norfolk*, and ſeveral other of our *Ships*, who were always better in *health* when they drank

drank *Beveridg*, than when they drank *Water* alone, or found *Wine* and *Water*. From theſe *Experiences* I adviſed the *Captains* of each reſpective Ship, to procure *Beveridg* for the common Drink of the Men, and the *Succeſs* anſwered my Expectation.

This is an exact *Relation* as I took it from Dr. *Oliver*'s own mouth.

I have more to ſay, but have already out-run the *Bounds* of an *Appendix*; and therefore ſhall omit what remains for another opportunity.

FINIS.

Novum Lumen Chirurgicum:

OR, A

NEW LIGHT OF CHIRURGERY.

Wherein is Discovered, a much more Safe and Speedy way of *Curing WOUNDS*, than hath heretofore been usually practised.

Illustrated with several Experiments made in Flanders *in the Year* 1694.

By JOHN COLBATCH, *Physician, a Member of the College of Physicians*, London.

The Second Edition.

LONDON,

Printed for *D. Brown*, at the *Bible* and *Swan* without *Temple-Bar*, 1698.

TO THE KING'S Moſt Excellent MAJESTY.

May it pleaſe your Majeſty;

THE great Experience I found of your *Majeſty's Bounty* and *Favours* in the late *Campagn* in *Flanders*, and more eſpecially that inexpreſſible one, intimated by Sir *Henry*

Henry Bellasis, I mean your *Majesty's* good Wishes, and Care of the meanest of your *Subjects*, when both his *Life* and *Reputation* were designed to be snatched away by *Wicked* and *Unreasonable* Men, whom he never injured: These Considerations, *Royal SIR*, as they bind me perpetually to *Dedicate* my Life to Your Service; so they also give me Encouragement to presume, the same *Fountain* of *Favour* and *Goodness* will allow Your *Princely Patronage* to the ensuing Sheets, which I had leisure to write under Your *Majesty's Banner*, the last Summer, when there was little Action in the Field.

I am sensible every new *Hypothesis* is at first exploded; and my *Medicines* being entirely new, as well as the Method of their Use and Application

plication, I muſt meet with a *Legion* of *Opponents*, which makes me the more to ſtand in need of Your *Royal Support*; which yet I beg no further, (in this Caſe) but that they may have fair Play, and a clear Stage: Let them ſtand or fall as they merit and deſerve; ſince I am aſſured they will ſtand the moſt ſtrict Examination, and ſevereſt Teſt.

I know that all *Arts* and *Sciences* in every Age, find a beneficial Improvement by *Ingenious Inquirers*; and that the *Art* of *Chirurgery* (as it hath been hitherto practiſed) did never arrive to the *Zenith* of its *Perfection*, I have made bold (in the *ſubſequent Diſcourſe*) to affirm. In which Poſition I am the more confirmed, when I reflect upon the *Modern*

Modern Diſcovery of the *Circulation* of the *Blood*, by the Learned Dr. *Harvey*; before which time a Man would have been accounted a *Diſtracted Perſon*, who ſhould have averr'd, that all the *Blood* in a *Man's Body* ſhould paſs through his *Heart* fifty times in an Hour. And much greater Diſcoveries and Improvements, ſince St. *Paul* went *Coaſting* to *Rome*, are found out in the *Art* of *Navigation*, by the aſſiſtance of the *Compaſs*: for now every *Cabin-boy* can demonſtrate the verity of *Antipodes*; tho formerly a *Learned Prelate*, who firſt *preached* that *Doctrine*, was accounted an *Impoſtor*, and ſeverely cenſured for the ſame.

I pretend not, *SIR*, to eſtabliſh my *new Doctrine* by working of *Miracles*;

Miracles; but I hope, I may with *Modeſty* enough be poſitive in my Aſſertion, that the Method of *Chirurgery* hitherto uſed is not the beſt: That all *Probes* and *Tents*, all *Digeſtive* and *Suppurating Medicines*, all *Cauteriſing* and ſtreight *Ligatures*, are Injurious to their *Patients*, and *procraſtinate* their *Cure*. I am alſo certain, that my *Medicines* will *cure* any *Wounds*, whether in the *Fleſh*, or within the *Cavity* of the *Body*, where as *dangerous Wounds* were ever *cured* by any former *Applications*, and that with much greater ſpeed and ſafety to the *Patient*, ſince they prevent *Fevers* and *Mortifications*.

If my *Medicines* prove any way beneficial to *Mankind* in General, I ſhall be abundantly ſatisfied and rewarded; having no high-

er *Ambition*, ſave that I deſire to be accounted, what I ſhall ever endeavour to approve my ſelf,

ROYAL SIR,

The Moſt Humble, and

Moſt Obedient of Your

Majeſty's Subjects

and Servants,

JOHN COLBATCH.

TO THE READER.

FRiendly Reader, *I have for about* Seven Years *applied my ſelf with all* Heartineſs *and* Vigour, *to the making of ſuch* Experiments, *whereby I might be capable, in ſome meaſure, to relieve the* Neceſſities *of thoſe who* laboured *under ſuch* Diſtempers, *which, by the* Methods *and* Medicines *generally uſed, are, if at all, yet very difficultly to be cured: And I* thank God, *my Labours have not been altogether* ineffectual.

Amongſt the Multitude *of my* Experiments, *I thought it might not be* loſt labour *to attempt ſomething in order to be* ſerviceable *to thoſe* Worthy Perſons, *who out of a* Principle *of* Bravery, *and* Love *to their* Country, *do run themſelves into the utmoſt* hazard *of their* Lives; *who, if they chance to be* wounded, *tho but* ſlightly, *it many times proves worſe to them than* Death *it ſelf; nay frequently, after they have endured the* greateſt Torture *and* Miſery, *Death at laſt puts a* Period *to all.*

Having at length lighted upon a pair *of* Medicines, *the one* Internal, *and the other* External, *which I ſuppoſed would anſwer my* Intentions; *I began to make* Experiments *upon* Dogs *and other* Animals, wounding *them in the moſt* deſperate *manner I could contrive: and in about a* Hundred Experiments *that I made, I had not above* five *that* miſcarried, three *of which were made before the* Right Honourable *the* Lord Cutts; *but* two *of thoſe* three, *as I can plainly make appear, after the danger was over, were* poiſoned. *I was likewiſe much abus'd in a* Soldier *of his* Lordſhip's Regiment, *whom after my* Medicines *had ſet him free from all* ill Symptoms, *and he almoſt* well, *in my abſence for* four *or* five Hours, *(having before for* five Days *and* Nights *been conſtantly with him, for fear of* Roguery) *was made* drunk, *but by whom I know not, and in an* Hour *or* two *after my return he* died.

My failing in theſe laſt Experiments, *I ſuppoſe, was the reaſon I was not then* imployed *by* His Majeſty. *However, being ſufficiently ſatisfied of the worth of my* Medicines, *by the ſucceſs I had in the* Multitude *of* Experiments *I had before made upon* Dogs, *and* two *or* three *upon* Human Bodies; *I laid out a* large Sum *of* Money *in preparing a good quantity of them; and with them,*

them, at my own charge, I went to Flanders. When I came there, His Majesty was most Graciously Pleased, by a Publick Order throughout the Army. to give me an opportunity of making appear the Truth of my Pretensions; and, thanks to God, amongst the great number of Patients I had, there was but one that miscarried; and how he died I cannot tell, being my self at that time ill almost unto Death, and so not capable of looking after him.

The Malice of some People against me is sufficiently known; but this I am sure of, that not one Patient I had in Flanders, but will contradict that Printed Relation (in the Philosophical Transactions for February last) with Mr. Cooper's name to it; wherein he pretends to tell the World, That my External Medicine is the greatest Caustick imaginable. Now the Nature of all Causticks is to create great Pain, but of my Medicines the quite contrary; for instead of that, they are the greatest Anodynes, or easers of Pain that I ever met with. One very signal Instance whereof you will see in my Experiment made before Sir William Russel, &c.

My Medicines, where they are timely enough, and regularly used, cure all sorts of Wounds, without bringing them to Suppuration; but where Suppuration is once begun,

they are, I ſuppoſe, the beſt Digeſtives *now known: For where* Wounds *have been brought to* Suppuration, *and in a very* ill Condition, *which, by the common* Methods, *would have taken up many* Weeks *before they were, if at all, to be* cured; *by my* Medicines, *as in the caſe of the* Soldier *of Sir* James Leſley's Regiment, *and that of* Colonel Coy's, *&c. it has been performed in a* ſmall time.

In ſome Gun-ſhot Wounds, *where the* Bones *are extreamly* ſhattered, *by the* common Methods, *the bringing away of* broken Splinters *is extreamly* hazardous *and* troubleſome, *but by my* Methods *not ſo; tho ſuch* Wounds *require a much longer time before they are well than others: but who in ſuch* Caſes *will not have a little* patience, *when he is free from* Pain, *and under no confinement? All the* Patients *I have had under theſe* circumſtances, *have been* fatigued *with* long Marches, *expoſed to* Wind *and* ill Weather, *and endured all other ſorts of* Hardſhips, *which may have occaſioned their being longer in* Cure *than otherwiſe they might have been.*

The number of Experiments *I have made uſe of, tho I might have added many more in the enſuing* Tract, *is not great; but thoſe that are, I ſuppoſe, may be ſufficient to* demonſtrate *the* Truth *of my* Pretenſions; *which are. That all* curable Wounds *may be cured with*

much

much more eaſe and ſpeed than by the common Methods; *and that a great number of thoſe* Wounds *uſually accounted* Mortal, *are not ſo. And likewiſe, that the* ſtopping of great Fluxes *of Blood, the* nonperformance *of which coſts many* People *their* Lives, *is to be performed with the* greateſt eaſe *imaginable.*

I have been ſufficiently deterred *from* proſecuting *my moſt* juſt Deſigns *for the* good *of* Mankind; *having firſt of all, beſides many other* great Affronts, *been publickly* threatned *to be* murdered; *afterwards* my ſelf *with* two *of my* Friends *were ſecretly* poiſon'd, *one of whom in a ſmall time died in a moſt* miſerable condition, *and* we two *who* ſurvive *narrowly eſcaping with our* Lives. *However, the utmoſt malice of theſe pernicious People ſhall never hinder me from going on in my moſt honeſt Undertakings.*

Tho I have met with this ill treatment *from ſome* mean, ill principled People; *yet I muſt own, that the* Engliſh Army *affords a great many* Chirurgeons, *who are* Men *of extraordinary* Worth *and* Candor, *from ſome of whom I have received moſt* civil treatment.

I have purpoſely omitted the uſing of any, or at leaſt very few terms *of* Art, *but have made every thing as plain as I can; my deſign not being to* gratify *and* pleaſe Criticks, *but to ſatisfy* Gentlemen *of the* Truth *of* matter *of* Fact.

As for my not mentioning what my Medicine *are, with the* manner *of* preparing *them, I hope for the preſent that will be excuſed, by reaſon that every one knows where to be furniſhed with them ready to their hands.*

But ſome may ſay it looks too like a Quack *to give* large Encomiums *of thoſe* Medicines, *the which I have not made* publick *to the* World. *To which I anſwer, That ſome* mens Cenſures *I value not, having ſo many great* Precedents *before me, who gave* large *and* deſerved Encomiums *of thoſe* Medicines *they made not* publick *during their* Lives, *ſome of them not at all; and yet their* Medicines *were of* general uſe *and* Reputation, *as* Helmont's Mercurius Diaphoreticus, Willis's Preparation *of* Steel, *and* Tincture *of* Sulphur, Needham's Panacea, *&c.*

[*I have not at this time, neither have I had for theſe* twelve months *laſt paſt, the leaſt intereſt or concern in the* Medicines *here recommended; yet at the ſame time I am not aſhamed to let this* Piece *come abroad a ſecond time. The Experiments are every one of them true to a* tittle *as they are related; and for the* Hypotheſis, *I ſhall not deſert it, till ſomebody ſubſtitutes a better in its room.*]

From my Houſe in Villers ſtreet, York Buildings.

Novum Lumen

CHIRURGICUM.

HAving for a *long time* been much *diſſatisfied* with the *common Methods* of *Chirurgeons* in the *Cure* of *Recent Wounds*; and almoſt every day obſerving the *Inconveniences* that attended thoſe *People* who had occaſion to make uſe of them; therefore for my own *ſatisfaction*, and *Mankind's* good, I took into *Conſideration*, whether their *Methods* were agreeable to *Reaſon*, and the *Subject* upon which they *wrought*. At laſt I was fully ſatisfy'd, that their *Practice* was moſt unreaſonable; which I ſhall endeavour to evince, with as much brevity and accuracy as the *Unſettledneſs* of my preſent *Condition* will admit of: which when I have done, I ſhall lay down my own *Hypotheſis*, which I doubt not to confirm both by *Reaſon* and *matter* of *fact*, which is the moſt clear ſort of *demonſtration*. For the well performance of which task, I muſt firſt give a ſhort account of *Nutrition*, without doing

doing of which, my preſent Undertaking will be altogether *maimed* and *imperfect*.

To give an account of the *Nutrition* of *Human Bodies*, or of other *Animals*, in ſo clear a manner as it ought to be done, I ſhould firſt begin with the *Formation* of the *Fœtus*, and its *original conſtituent parts*, with the manner of its *Nutrition* and *Encreaſe* before all the parts are perfect, and how after, till the time of *Birth*; the performance of which task only, is ſufficient for a *Volume*: Therefore I ſhall content my ſelf with giving an account only, how what we *eat* and *drink* is *prepared* in the *Stomach* and other *Digeſtions*, and ſo made fit to ſupply the defects of all the parts of our *Bodies*; which, tho the moſt hard, continually ſuffer both a *decreaſe* and *increaſe*; nay even, in the terms of *Chirurgeons* upon another occaſion, *loſs* of *Subſtance*, and *ſupply* of that *loſs*.

The *ſolid Food* we *eat* being well *chewed* in the *Mouth*, is there mixed with a *Juice* contained in the *Glands*, which are in great numbers diſperſed all over the *Mouth* and *parts adjacent*; which *Juice*, being what we call *Spittle*, is highly *impregnated* with a *penetrating ſaline Spirit*: a demonſtration of the *Truth* of which is evident in a known and very *common Experiment*, which is as follows. Let a ſmall quantity of *Mercury* be put into a *Mortar*, *ſpit* upon it, and grind it very well with a *Peſtle*, and the *Mercury* will preſently be (according to the *vulgar expreſſion*) *kill'd*. The like to which nothing we know of will do, but thoſe things which manifeſtly are of a *ſaline* nature.

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The *Meat*, as above, being well *chewed*, and afterwards conveyed into the *Stomach*, and there *diluted* with a *proper Vehicle*, as *Wine*, *Ale*, &c. (the more *generous* the better) is, by the means of the foreſaid *ſpirituous*, *ſaline Liquor*, (the *heat* of the *Stomach* likewiſe aſſiſting) divided into ſuch *minute Particles*, as conſtitute that *viſcid Liquor* we call *Chyle*; which *Chyle* is diſcharged out of the *Stomach* ſo faſt as it is made, by means of the *Liver*, which conſtantly preſſes upon it through the *Pylorus* into the *Inteſtinum Duodenum*, where, and in the *Jejunum*, it is further *attenuated* by the intervention of the *Pancreatick Juice* and the *Gall*; which, by the *Fulneſs* of the *Stomach*, are *ſqueezed* out of thoſe *Veſſels* that contain them into the aforeſaid *Guts*; from whence the finer parts of which *attenuated Liquor*, are received into certain kind of *Veſſels* we call *Lacteal* or *milky Veins*, which are in *vaſt numbers inſerted* into the aforeſaid *Guts*: the *groſſer part* by the *Periſtaltick motion* of the *Guts*, is carried downwards, to be caſt away as *Excrement*.

Now what is received into the *Lacteal Veſſels*, is carried on to the *common Receptacle* of the *Chyle* in the *Meſentery*; from whence by a very *large Veſſel*, called the *Thoracick Duct*, into the *Subclavian Vein*; thence, together with the returning *Blood* and *Lympha*, into the *Vena Cava*, and ſo to the *right Ventricle* of the *Heart*; whence, by the *Syſtole* or *Contraction* of the *Heart*, through the *Arterial Vein* into the *Lungs*; where, by the *Contraction* and *Dilatation* of the *Lungs*, it is mixed with the *Blood*, and that part of

of it which is fit for that purpose, is there made *Blood*: The rest only remains confusedly mixed with it, and is that which is made use of for the *Nutrition* of the parts, being what we call *Serum*. The *Blood*, as I apprehend, not being at all made use of for the *Nutrition* of the *parts*, but is that *red Substance*, wherein is contained the *Biolicnium*, or *Lamp* of *Life*; it being to it a sort of *Pabulum*.

I confess some *People* say, that *Heat* and *Fire* proceed from nothing else but the *parts* of *Matter* being put into *violent motion*; and others, that there can be no such thing as a *Flame* in our *Blood*, because a sufficient quantity of *Air* cannot pass through the *Coats* of our *Veins* and *Arteries*, or any other way enter into the *Blood* to keep that *Flame burning*; so that the *Heat* we feel in our *Bodies*, proceeds from nothing else but the *violent motion* of the *Blood* through the *Veins* and *Arteries*.

To which I answer, that having several times tried, by the most *violent Agitation* of many *fluid Bodies* in *inclosed Vessels*, I could never perceive the least *warmth*; nay I have kept *Blood* as it came warm out of the *Veins* in continued *violent motion*, and instead of *hindering* it has *facilitated* its *cooling*.

But for that *Fire*, which I judg to be in the *Blood*, I suppose it quite different from common *culinary Fire*, and burns by quite different *means*, and hath a different *Pabulum*. For it is well known, that *Blood* by *Distillation* affords but a very little of any such substance, that will afford *supply* to *common Fire*; and yet from *Blood*,

but more eſpecially from that *Excrement* of it we call *Urine*, by a peculiar management, may be obtained that *ſubſtance* we call the *Phoſphorus*, which is as much *Fire* as any thing we know, it being ſo *inflammable*, that unleſs it be *immerged* in *Water*, it preſently conſumes all away in *Flame*. There is an old Maxim, that *Nil dat, quod in ſe non habet*; which is very pertinent to the point in hand: and from whence I infer, that if there were not *Fire* in the *Blood* actually before, I cannot underſtand how this moſt *fiery ſubſtance* can be obtained from it.

But there ſtill lies a mighty *Objection* in my way, which I ſhall endeavour to clear before I go on. The *Objection* is this; Suppoſe the *heat* of the *Body* proceeds from this *fiery ſubſtance* in the *Blood*, how comes it to paſs, that in many caſes, as in *Wounds*, when *matter* is *generating*, *&c.* that the *Motion* of the *Blood* and *heat* of the *Body* is greater than at other times, when that matter, which enters into the *Blood*, and cauſeth this *hurry* and *diſorder*, hath no tendency to *increaſe* the *Flame?*

To which I anſwer, that tho ſuch *Particles* entring into the *Blood*, may increaſe the *heat* and *motion* of it; yet it is not out of any *natural* tendency, that they have *per ſe*, ſo to do: yet by *accident* they may do it, by cauſing an *inteſtine motion* or *fermentation*, whereby the *Cement* of the *Blood* being looſned, and its *Texture* much ſpoiled, this *Flame* is then at liberty to burn more *furiouſly*. An inſtance of which may be ſeen in *common Fire*; for if the *combuſtible matter* of which it is to be made, be laid

cloſe

cloſe together, it will ſcarce burn at all; but being laid at a little *diſtance*, it preſently *burns briskly*. And if it were not ſomething more than meer *motion* a little *excited*, which is the cauſe of *Fevers*, I cannot underſtand how a very *fat Perſon* in a *violent Fever*, ſhould in a very *few days* be reduced to almoſt nothing but *Skin* and *Bones*, when the *viſible Evacuations* of *Urine* and *Stool* are generally leſs than at other times; which frequently happens. Now it is well known, that no *Liquors* will *ferment*, but thoſe which manifeſtly abound with *fiery Particles*, as all ſorts of *vinous Liquors*; and the *ſtronger* all ſuch *Liquors*, the more readily they *ferment*.

The *confuſed mixture* of *Blood* and *Serum* (I ſtick not to call it a *confuſed* one, by reaſon that with *good Glaſſes* the *Blood* may be ſeen *floating* in the *Serum*, in the form of ſmall *Globules*) is carried back from the *Lungs* by the *venal Artery* into the *left Ventricle* of the *Heart*, and from thence *protruded* by means of the *great Artery*, which is immediately divided into a great many *branches*, to all *parts* of the *Body*, even the moſt *minute*; the *Bones* themſelves not being deſtitute of *Arteries* to bring this *mixture* to them for their *Nutrition*, and *Veins* to carry back what is *ſuperfluous*.

The manner of *Nutrition* I conjecture to be as follows. The *Arteries*, which, as is before obſerved, at their *Origine* are very *large*, are at laſt divided into an almoſt *innumerable company* of *ſmall Branches*, even ſo ſmall, that the *beſt Glaſſes* will ſcarce diſcover them to us. At the

extremities

extremities of theſe ſmall *Arteries* is that compound *Liquor* we call *Blood*, diſcharged upon or into the *Muſcular Fibres*; and not only the *ſoft parts*, but even the *Bones* themſelves are obſerved to be *Fibrous*; which *Fibres*, altho they are never ſo ſmall, are yet *hollow*. Now there are vaſt quantities of the *ſmall Particles*, which compoſe not only the *fluid*, but alſo the moſt *ſolid Parts*, continually diſcharged by *inſenſible Tranſpiration*. And *Sanctorius*, that *famous Roman Phyſician*, in his nice *Experiments* obſerves, that we waſte more every day by *inſenſible Tranſpiration* through the *Pores*, than by the *viſible*, *ſenſible Evacuations* of *Urine* and *Stool*. The *waſte* which is made by *inſenſible Tranſpiration*, is repaired by the *Homogeneous* part of that *Liquor* contained in the *Arteries*, commonly called *Serum*; which *Serum* is *adapted* or made fit by the *Pores* of the *parts* it is brought to, to be applied to ſuch places where there is any *waſte*. But how the *parts* of *matter* are *modified* and *adapted* ſo as to *conſtitute* a *Body*, I think it would be arrogance in me to pretend to define; but that *Bodies* of very *different natures* may, and do receive *nutrition* and *increaſe* from one and the ſame ſubſtance, which in it ſelf ſeems to be *ſimple* and *Homogene*, the following *Experiments* (the one a common one, and known to every body, the other two made by two of the *greateſt Men* theſe laſt *Ages* have afforded, *viz. Helmont* and *Boyle*) will, I ſuppoſe, clearly demonſtrate.

Let

Let a *Crab-tree-ſtock*, which hath *ſix branches* have into each *branch* a *graft* ſet, each *graft* of a different *nature*; as for inſtance, let *three* of the *grafts* be of *Pears*, each of a *different ſort*, and the other *three* of *Apples*, ſome *ſweet*, ſome *ſour*; and yet the *Juice* which is brought up into the *Stock*, which had the *top* been left on, would only have produced *Crabs*, this *Juice* being brought into the *grafts*, is by their *Pores* ſo altered, that it affords not only *nutrition* and increaſe to the *grafts*, but enables them to bring forth *Fruit*, each according to his *kind*: which ſight I have, not without great delight, ſeen.

The ſecond *Experiment* was one made by that *great Enquirer* into *Nature's Secrets*, *Helmont*; which is as follows. He took *two hundred Pound* of *Earth dried* in an *Oven*, and having put it into an *Earthen Veſſel*, and moiſten'd it with *Water*, he *planted* in it the *branch* of a *Willow-tree* of *five pound weight*; this he *watered* as need required with *Rain*, or with *diſtilled Water*: and to keep the *neighbouring Earth* from getting into the *Veſſel*, he imployed a *Plate* of *Iron tinn'd* over, and *perforated* with many *Holes*. *Five Years* being *effluxed*, he took out the *Tree* and *weigh'd* it, which (computing the *Leaves* that fell *four Autumns*) he found to *weigh one hundred ſixty nine Pounds*, and about three *Ounces*: And having again dried the *Earth* it grew in, he found it wanted of its *former Weight* of *two hundred Pound*, only about a *couple* of *ounces*; ſo that *one hundred ſixty four Pound* of the *Roots*, *Wood*, and *Bark*, which conſtituted the *Tree*, ſeem to have ſprung from the *Water* only. The

The third *Experiment*, being Mr. *Boyl's*, was this. He ordered his *Gardiner* to dig out a convenient quantity of good *Earth*, and *dry* it well *in an Oven*, to *weigh* it, and then to put it into an *Earthen Pot*, almoſt *level* with the *ſurface* of the *Ground*, and to ſet on it a *ſelect Seed* of *Squaſh*, which is a kind of *Indian Pompion*, that *grows apace*; this *Seed* he ordered him to *water* only with *Rain* or *Spring-water*. The *Plant flouriſhed* and *grew apace*; and altho it were ſown too late in the *Year* by *two Months*, yet being *gathered* at the *proper Seaſon*, the *Pompion*, *Stalks* and *Leaves*, weigh'd *three Pound* wanting a *Quarter*; then he took the *Earth*, and *dried* it nicely, and found it *weigh* exactly as much as before.

As a *Confirmation* of the *Truth* of the *two* laſt *Experiments*, every body knows, that *Mint*, and ſuch like *Plants*, being ſet in a *Bottle* of *Water*, *flouriſh* as much, or more than thoſe *planted* in the *Earth*. Now theſe *Vegetables*, altho they receive their *nutrition* and *increaſe* from ſo *ſimple* and *homogene* a ſubſtance as *Water* is; yet by a *Chymical Analyſis*, there may be obtained from them ſuch *ſubſtances*, as are not eaſily to be mixed with *Water*, and ſeem to be of an altogether *different nature* from *Water*; nay the very ſame *ſubſtances*, for the moſt part, may be obtained from *Vegetables* as from *Animals*, if they are rightly *managed*. For tho *Volatile urinous Spirits* are generally owned to be the *product* of *animal ſubſtances* only; yet I very well know,

that from almoſt all ſorts of *Vegetables*, without any *Addition*, [only ſuffering them to putrefy] may be obtained a *Spirit* and *Volatile Salt*, no way differing from that of *Harts-horn*, and *Human Blood*. From all which I gather, that if the great *variety* of *Vegetables*, which are of ſuch *different natures*, have their *nutrition* and *increaſe* from ſo ſimple a *Body* only, as *Water* is; I know no reaſon we have to doubt, but that all the parts of a *Human Body*, or other *Animals*, may have their *nutrition* and *increaſe* from the *Serum* of the *Blood*, which is *analagous* to *Water*.

When there is, by any accident, a *Diviſion* made in the *fibrous parts* of the *Body*, which is what we call a *Wound*, (and by the way, I think there is no difference, only *ſecundum majus & minus*, between thoſe *waſtes* made by *Tranſpiration*, which are *natural*, and a *Wound* made by *force*, which is *preternatural*) *Nature* her ſelf would in a ſmall time make an *Union*, if ſhe were not *hindred*, but *aſſiſted*. Now I ſhall endeavour to make appear, that by the common *Methods* and *Medicines* of *Chirurgeons* ſhe is hindred, and by my *Methods* and *Medicines* ſhe is aſſiſted; which is all, not only in this caſe, but in all others, where *Nature* is oppreſſed, that is required of *Phyſicians* or *Chirurgeons*; who are, or at leaſt ought to be, *Miniſters* of *Nature*, and not her *Oppreſſors*.

For to ſhew wherein lies the *unreaſonableneſs* of the *common Methods* of *Chirurgeons* in the *Cure* of *Wounds*, and wherein they *hinder* and *oppreſs Nature* in her moſt *regular Operations*:

Suppoſe a *Wound* be made, and it's no matter where it is; for what will *cure* a *Wound* in one place, will do it in another; the matter which is brought for the *nutrition* and ſupply of all the *parts* being the ſame. The two *Experiments* before mentioned being ſufficient to confirm, that what will afford *nutrition* and *increaſe* to a *muſcular, fleſhy part*, may do the ſame to a *Bone*; for the *Pompion* is a *ſoft Subſtance* like unto *muſcular Fleſh*, and the *Willow* a *hard, brittle ſubſtance*, analagous to that of *Bones*; and yet both had their *nutrition* and *increaſe* from *Water* only.

Now let a *Wound* be made where it will, and how it's made matters not, whether it be by *Cutting* or *Contuſion*; only this difference there is between thoſe *Wounds* called *inciſed* ones, and thoſe called *contuſed ones*, (tho by the way, I think I may ſafely affirm, that there is no *Wound* made by *inciſion*, but may as properly be called a *contuſed one*, let the *Inſtrument* be never ſo keen with which it is made, as a *Wound* made with a *Bullet*; but not in altogether ſo eminent a manner, the difference being only *ſecundum majus & minus*) that there is a *larger ſpace* between the *Lips* of the one, than that of the other; and ſo by conſequence, *Nature* is at more *charge* and *trouble*, and requires longer time for the making an *Union* of the one than of the other. For altho in both there requires the *generation* of *freſh ſubſtance*; yet in *Gun-ſhot Wounds* there is a greater quantity to be generated than in *inciſed* ones, the *Lips* of the *Wound* being further aſunder; and ſo by conſequence

the more work there is to be done, the longer time *Nature* requires for the doing of it.

Let a *Diviſion* be made in any of the *parts* of the *Body*, which, as is before obſerved, is what we call a *Wound* (how it is made matters not, whether it be by *cutting* or *contuſion*) the *nutritious Juice* is immediately brought to the *extremities* of the *wounded Veſſels* all over the *Wound*. Now I ſtick not to call the ſmalleſt *Fiber*, or *Fibril*, a *Veſſel*; for if they were deſtitute of *Cavities*, they could never be nouriſhed, much leſs admit of *increaſe*. Now all the *Medicines* made uſe of in the *common Methods* of *Chirurgery*, are of that nature, that they ſo greatly *relax* the divided *Fibres*, that they cannot contain the *nutritious* matter brought to them, but let it paſs into the *Wound*, where it is by the ſame *Medicines* corrupted, and turn'd into that *ſubſtance* we commonly call *Matter*. Now the *Corruption* of the *nutritious Juice* cannot be performed without a ſort of *Fermentation*; and it is the *fermenting Particles*, that *fretting* the *Fibres*, cauſe *inflammations* in *Wounds*; and by entring into the *Blood*, and dividing of its *Texture*, cauſe *Symptomatick Fevers*, which frequently prove ſo fatal. As a confirmation of the Truth of which, I muſt appeal to the *experience* of all *Mankind*, who have ever been *wounded* (and there is ſcarce one amongſt a *thouſand*, but hath received ſome ſort of *Wound* or other) whether they have not felt *pain*, and had ſomething of a *Fever*, more or leſs, according to the *largeneſs* of the *Wound*, during the time that *matter* was *generating*. Now it is evident, that whatever will cauſe

 ſuch

ſuch ſort of *pain*, and that will create a *Fever*, muſt be of a *heterogeneous nature*, and an *Enemy* to that *Body* (for I poſitively believe, that it is the *Medicines* only which are applied, that are the occaſion of all thoſe ill *Symptoms* which frequently attend *Wounds*) to which it is *applied*, or into which it is *received*. The *Truth* of which, even the *nature* of a *Fever*, is a ſufficient confirmation: for a *Fever*, in the terms of many *great Men*, is nothing elſe but a *Nixus Naturæ*, or a *Contention* of *Nature* to throw off its *Enemy*. Others call a *Fever Sanguipurgus*, or a *Purifier* of the *Blood*, which is the ſame with the former, only in *different Words*. And a late *learned Author* (the *worthy* Dr. *Cole*) in his *Treatiſe* of *intermitting Fevers*, the one only *rational Piece*, in my opinion, that ever was writ upon that Subject, plainly makes it appear, that the *ſeat* of *Agues* is in the *Cortex* of the *Brain*, from whence, at certain *periods* of time, the matter is *thrown off* by the *mediation* of the *Nerves*, to all the *parts* of the *Body*, which cauſeth that *Coldneſs*, *Rigor*, and *Horror* that is perceived at the beginning of a *Fit*; this *matter* being afterwards received into the *Blood* by the *Capillary Veins*, which are every where diſperſed, and being of a *heteregeneous nature* to the *Blood*, puts it into a *violent motion* and *agitation*, in order to throw it off: which *irregular motion* never ceaſes, till all the *matter* cauſing it is *thrown out* by the *external cuticular Pores*. I could uſe many more *Arguments* to prove, that not only *Symptomatick Fevers*, but even all ſorts of *continued ones*, do proceed from *heterogeneous Par-*

ticles being admitted into the *Blood*, which for brevity's ſake, I ſhall omit.

Now, after they have with ſo much *hazard* and *trouble generated matter* (tho many times inſtead of *generating matter*, their *ſuppurating Medicines* cauſe *Mortifications* in the *parts*, eſpecially if there be an *ill habit* of *Body* before-hand; the *bad conſequences* of which every body knows, but more eſpecially, to their *ſorrows*, thoſe who have *experienced* it themſelves) they then uſe *mundifying Medicines*; and when *Nature* is almoſt *tired* and *oppreſſed*, *weak* as ſhe is, they leave her to do her own work: for, for my part, I don't at all ſee or underſtand, that ſhe is in the leaſt aſſiſted by the *Medicines* they afterwards uſe.

But what I have been hitherto ſpeaking of in relation to their *Medicines* and *Practice*, has only relation to *external Fleſh-wounds*; and if that *hazard* attends the *cure* of thoſe *Wounds*, what is to be expected in *Wounds* within the *Cavity* of the *Body*, where the *Lungs*, *Liver*, *Guts*, &c. chance to be *wounded?* In ſuch caſes their *Medicines* are by themſelves owned to be *inſufficient*. And if at any time it chances, that any of the *forementioned parts* are *wounded*, and the *Party* chances to *recover*, themſelves account the *recovery* almoſt *miraculous*; by reaſon that ſuch *Wounds*, by the *general vogue* of the *greateſt Chirurgeons*, are accounted *Mortal*, and that not without reaſon: For to bring a *Wound* in the *Lungs*, *Liver*, *Guts*, &c. to *ſuppuration*, is to bring *certain Death*; and to *cure* a *Wound* without bringing it to *ſuppuration*, they don't pretend to. So that if any of the *forementioned*

Wounds

Wounds are *cured* by them, it is to be attributed to ſome *ſtrange* and *ſecret Operation* of *Nature* unknown to every body, and not to their *Skill*: for he is only accounted *skilful* in the *cure* of any *Malady*, the greateſt number of whoſe *Patients* recover; but thoſe who have not *one* in *ten* of their *Patients* which don't *miſcarry*, are not to be accounted ſo: And I verily believe, that not *one* in *ten* of thoſe who have been *wounded* in the *Cavity* of the *Body*, and have been managed after the *common Methods* of *Chirurgeons*, have recovered. So I leave it to every *Man's Judgment*, which *Method* is moſt to be confided in, either that where ſcarce *one* in *ten miſcarries*, as in mine; or the other, where not *one* in *ten recovers*, as in the *common Methods* of the *Chirurgeons*.

Beſides the *Inconveniences* and *Inſufficiencies* of their *Methods* and *Medicines* already mentioned, there ſtill remains another as great as any, which is, when any *large Blood-Veſſel* is wounded, how to ſtop the *Flux* of *Blood*; which is not to be performed by them without either *actual* or *potential Cauteries*, the *inconveniences* of which almoſt every body knows: nay *Cauteries* themſelves are not to be truſted without very *ſtrict bandage*, which always, or for the moſt part, cauſeth *Mortifications*; the *neceſſary conſequences* of which is *loſs* of *Limbs* or *Life*, many times both, as I my ſelf with great regret have ſeen.

In all *Wounds*, tho but *fleſh ones*, of any conſequence, they confine their *Patients* to the *loweſt Diet* imaginable, forbidding them the *eating* of *Fleſh*, or *drinking* of *Wine*; and altho there

have been great loſs of *Blood* before at the *Wound*, yet they ſeldom or never fail, to the great *weakning* of their *Patients*, to let *Blood* in great quantities, which they often *repeat*, to *prevent* the *increaſe*, and *taking off* the *Fever*, which always, more or leſs, attends them; which, in ſpight of all they can do, frequently proves of *fatal conſequence*.

I have not mentioned their *Tenting*, *Probing*, and other *nonſenſical trumpery*, which is ſtill uſed by moſt *Chirurgeons*, to the great *detriment* of their *Patients*, by reaſon that many *judicious Chirurgeons* in all places begin to leave it off; who, I queſtion not, will be glad to change their *old unſucceſsful way* of *Practice* altogether, when once they can be informed of a *better* and *more certain Method*.

To give an account of the *Methods* I uſe in the *cure* of *Wounds*, will not take up much room, by reaſon they are *ſhort* and *eaſy*, and not *round about*, as the *common Methods* are. However, that I may do it ſomewhat clearly, I ſhall begin with *inciſed Wounds* ſo called; and next of all proceed to give an account of *contuſed ones*, made with *ſhot* or the like. *Firſt*, where only the *Muſcular fleſhy parts* are *wounded*; and *Secondly*, where the *Bones* are *broken* and *ſhattered* to *pieces*, and the *Tendons torn*: which laſt ſort of *Wounds* I have not in the leaſt touched upon in my account of the *unreaſonableneſs* of the *Methods* commonly uſed by *Chirurgeons* in the *cure* of *Wounds*; for if there be ſuch *hazard* and *trouble* in the *cure* of *inciſed Wounds*, all *People* will allow, that it muſt be ſo in a much more

more *eminent degree* in ſuch *Wounds* as theſe.

Suppoſe a *Wound* be made with a *Sword* or other *cutting Inſtrument*, the *length* or *depth* of which ſignifies nothing; I make a *ſolution* of *my Powder* in *Water*, for want of which in *Urine*: and as ſoon as with conveniency I can, the ſooner after the *Wound* is made the better, I either *ſqueeze*, or with a *Syringe*, if the *Wound* be *deep*, *inject* into the *Wound* ſome of the ſaid *Solution*: I then *cloſe* the *Lips* of the *Wound* together, which if *wide* and *large*, I *ſtitch* up. When I have ſo done, I apply a *Pledget* of *fine Tow*, *wet* in the ſaid *Solution*, to the *Wound*, not letting it go into the *Wound*, but only juſt to cover the *edges* of it, and lie all over it. And if there chance to be any *large Artery* cut, I hold on the *Pledget* cloſe with my *Hand*, till the *Flux* of *Blood* ceaſeth, which will be in a ſmall time, otherwiſe not; afterwards I *bind* it on with a very *eaſy Ligature*, then I give my *Tincture* in *Wine*, and repeat it according to the *Directions* at the latter end of the *Book*.

Now to prove that my *Medicines* are *agreeable* to the *Nature* of *Human Bodies*, and of that *Juice*, by which I *conjecture* (for to be ſure I cannot) the *Body* is *nouriſhed*, and more *efficacious* than the *Medicines* uſed by *Chirurgeons*, the following *Arguments* will, I ſuppoſe, evince; they not being the *effects* of *Fancy*, but of moſt *certain* and *reiterated Experiments*.

Firſt of all, my *Medicines* never *cauſe* any *Pain*, unleſs it be juſt at the time when the *External Medicine* is *ſqueezed* or *injected* into the *Wound*,

Wound, and that *pain* very little more than what would be cauſed by the uſing of *Spring-water* in the ſame manner.

Secondly, There is no ſuch thing as *Pain* afterwards, but the *parts pliant* and *eaſy*, as if not *hurt* at all.

Thirdly, If there has been great *Pain* before, according as it hath been either *greater* or *leſs*, ſo it hath been a *longer* or *ſhorter* time before it hath been taken off, but the *greateſt* in a *ſhort time*. As when a *Wound* had been long received, and had had other *Applications* to it before mine, the *Wound* much *inflamed*, and the *parts* adjacent much *ſwelled*, and ſo by conſequence the Party in *great pain*; theſe *Symptoms* altogether have been totally *taken off* in *twenty four*, or *forty eight Hours* at fartheſt; and many times in ſuch Caſes, the *greateſt Pain* taken off in a *few minutes*. But they never have been the cauſe of *pain*, *ſwelling*, or *inflammation*; which by the way is a certain argument they are no *Cauſticks*, as ſome *Men* maliciouſly and *falſly* report.

Fourthly, There has never any ſuch thing as a *Fever*, let the *Wound* be either *internal* or *external*, attended any of thoſe *People* who have made uſe of my *Medicines* ſoon after they have been *wounded*; but ſeveral who have been *ill managed* before, and have been thrown into *violent Fevers*, have in *twenty four hours*, by the uſe of my *Medicines*, been totally freed from them, and that without *Blood-letting*, or *abſtaining* from the *eating* of *Fleſh*, or *drinking* of *Wine*; the more of which they *drink*, ſo that they keep within the bounds of *Moderation*, I always find them the better.

Fifthly,

Fifthly, in all inciſed *Wounds*, where my *Medicines* have been timely enough uſed, and no other *Application* preceded, they are perfectly *cured* in a *few days*, without bringing them to *ſuppuration*; and I have frequently obſerved, that at about *four days* end, ſuch *Wounds* have been *filled* with a *Subſtance* much like unto *Harts-horn-gelly*, which I have conjectured to be *young Fleſh*, and in *two* or *three days* I have found my *conjectures* true; the ſaid *Subſtance* being converted into *good Fleſh*. But where *Wounds* have been long received, and *matter* generated; ſuch *Wounds* have been *cured* in a ſmall time, without repeating the *Application* above *once* in *four days*. Some of thoſe *Wounds* that had been long received I have had to do with, which have been both *deep* and *large*, and by the *common Methods* muſt have diſcharged a *great quantity* of *matter*; but the *quantity* of *matter* that has come away after my *Medicines* have been uſed, hath been ſo *ſmall*, that I have good reaſon to conjecture, that it has been *no more* than what had been *formed* before my *Medicines* were *applied*.

As for *Gun-ſhot Wounds* in any of the *fleſhy parts*, they are *cured* after the ſame manner with the former, and without the *leaſt ill Symptom*; only this difference, that whereas in *inciſed Wounds*, if my *Medicines* are applied as ſoon, or preſently after the *Wound* is received, there is little or nothing comes away from them; but in *Gun-ſhot Wounds*, the *Glands* and *Lymphatick Veſſels* being *broke* and *torn* to *pieces*, there is for ſome

ſome time a *conſiderable quantity* of the *watry matter* contained in thoſe *Veſſels diſcharged* out of the *Wound*; and the *loſs* of *ſubſtance* being *great*, they require a *longer time* before they are *cured*.

But ſome may *object*, How is it poſſible for you without bringing your *Wound* to *Suppuration*, to cauſe a *diſcharge* of *extraneous Bodies*, as *pieces* of *Clothes*, *Splinters* of *Bones*, *&c.* which for the moſt part are *lodged* in *Gun-ſhot Wounds*?

To which I anſwer, That the foreſaid *watry Liquor* being *continually diſcharged* out of ſuch *Wounds*, and the *parts adjacent* not being *ſwell'd*, as they *never* are ſo as to *cloſe up* the *Orifice* of the *Wounds*; by the means of the ſaid *Liquor* they are brought away without any *hazard* or *trouble*, and for the moſt part without any *pain* at all, [eſpecially if of a *paſſable bigneſs*; if not, the *Orifice* muſt be *dilated* to *make way* for them.] And as for that *Slough* which ſome people make ſo great a *noiſe* about, it is alſo by the means of the ſaid *Liquor*, brought away without any *digeſtion*, the *Slough*, as they call it, being nothing elſe but a *complication* of *torn* and *broken Fibres lodged* about the *ſides* of the *Wound*. As for *broken Bones*, they being put into their *right poſture*, the *nutritious Juice* which is brought to them fills up the *void ſpaces*, and by the *Texture* of its parts in a little time, *grows* as hard as any other part of the *Bone*. What has been ſaid of *Bones* and *Fleſh*, may alſo be ſaid of *Tendons* (the *wounding* of which was heretofore accounted ſo *fatal*, that nothing was accounted more; they being of a *mucilaginous nature*, *digeſtive Medi-*

cines

tines were wont to *rot* and *deſtroy* them, and ſo cauſe *Mortifications*) ſo that their *ends*, if *totally divided*, can be *brought* any thing *near together*; which if it be not poſſibly to be done, as for the moſt part it is, there is no other *ill conſequence*, but the *loſing* the *uſe* of that *part* to which it *belongs*.

From what has been ſaid, I think I may rationally infer, that my *Medicines* are agreeable to *Nature*, and aſſiſt her in her *regular Operations*: And on the contrary, that the *common Medicines* of *Chirurgeons* are diſagreeable to *Nature*, and hinder her in her *Operations*.

As for inſtance. *Two Officers* of the *Regiment* of *Fuſileers*, that were wounded, were in the ſame *Tent* together: the one a *Man* of *good Habit* of *Body*, had received a *ſlight Wound* in the *Arm*; his *Wound* had been received *three weeks*, and was managed according to the *common Methods*; his *Arm* was much ſwell'd, greatly inflam'd, and he in great pain, and not like to be well in a long time. The other a *Perſon* of a very *ill habit* of *Body*, had a *Sword* run through the moſt fleſhy part of his *Thigh*, the *Orifices* on each ſide *three Inches* long; and yet he being managed according to my *Methods*, in a little above a *week's time* was perfectly well, and never felt any *pain* from the beginning.

Their *Medicines* corrupt the *nutritious Juice*, and turn it into *Matter*.

My *Medicines* being of a friendly *nature* to the *nutritious Juice*, prevent it from degenerating or corrupting; which by ſo doing, that *Juice* is capable of performing the work that *Nature* deſign-

ed

ed it for; which is to fill up all *Vacuities*, either naturally or forcibly made; which is performed in the manner following. The *nutritious Juice* being by the *Arteries* brought to the *Parts*, the *Particles* of it are by the *Pores* of the *Parts* ſo modified, as to form a *Body* like unto that whoſe *Pores* it paſſed through; from whence it is not difficult to imagine, how very large ſpaces forcibly made, may be again filled up with freſh *Subſtance*, like unto what was there before that ſpace was made.

Their *Medicines* cauſe *inflammations* and *ſwellings*, and conſequently *pain* in and about *Wounds:* Mine not ſo.

Their *Medicines* either *per ſe*, or by accident, ſeldom or never fail to cauſe *Symptomatick Fevers.*

Mine not ſo; but on the contrary either prevent, or take them off when already fixed, and that without ſtarving and deſtroying *Nature* for want of neceſſary *Aliment.*

By their *Methods* and *Medicines* they can't ſtop *Fluxes* of *Blood* without moſt diſmal Conſequences.

My *Medicines* ſtop *Fluxes* of *Blood* with eaſe, and without hazard, and at the ſame time *cure* the *Wounds.*

For confirmation of what I have ſaid, I refer you to the following *Experiments*, the Truth of which is no difficult matter to be informed of.

To conclude all; I would not have any ſo to underſtand me, as to believe, that I poſitively aſſert, that I can *cure* all ſorts of *Wounds*, and

that

that no one ſhall miſcarry under my *Hands*; for whoever does ſo, is greatly miſtaken: For I muſt own that there may be ſome very few unlucky *Wounds* within the *Cavity* of the *Body*, that may elude the efficacy of my *Medicines*; yet moſt *Wounds* within the *Cavity* may be cured with all the eaſe imaginable. But for *External Wounds*, let them be what they will, I think there are few or none of them, ſo that *people* will be regular, but may be cured without hazard or inconveniency.

Experiment I.

John Mahulton, an *Iriſh Man*, in the *Regiment* of *Colonel Brewer*, in the *Company* of *Captain Furyfye*, was in a *Rencounter* run through the *left Arm*, and into the *left Breaſt*, between the ſecond and third *Rib*, upon which he immediately fell down as *dead*. He ſays, that he found the *Sword* paſs into the very inmoſt part of his *Breaſt*. Immediately upon the receipt of the *Wound* he had a great difficulty in *breathing*, and weight upon his *Diaphragme*, likewiſe a great quantity of *ſpumous Blood* and *Air* guſhed out at the *Wound* in his *Breaſt*; which *Symptoms*, I ſuppoſe, are a clear *demonſtration* that his *Lungs* were wounded. Mr. *Chomly*, *Chirurgeon* to the *Regiment*, immediately applied my *external Medicine*, which ſtopped the *Flux* of *Blood* at both parts, which at the *Wound* in his *Arm* was alſo very great.

But

But he did not give the *internal* one, as he ought to have done that *Night*; ſo his *ſhortneſs* of *Breath*, and *weight* upon his *Diaphragme* continued: but the *Morning* following giving it him, he was immediately freed from thoſe *Symptoms*, and that day marched on *foot ſix miles* with the *Army*, and was never in the leaſt out of order, or had any thing of *pain* after, neither did he at all confine himſelf to his *Tent*.

Experiment II.

ONE *Paterſon* a *Scots-man*, in the *Regiment* of the *Right Honourable* the Lord *George Hamilton*, (now Earl of *Orkney*) was, about *eight* a clock one *Evening* run into the *Belly* about *two Inches* above the *Navel* on the right *Side*; the *Sword*, as himſelf and ſeveral other *Spectators* ſay, entred at leaſt *ſeven* or *eight Inches*, and being a very broad one, could not fail of doing a great deal of *miſchief*. I may conjecture, for to be poſitive no *Man* can, that the *Sword* paſſed through the *Liver*; and the *Symptoms* that attended him, do, I believe, plainly demonſtrate that the *Inteſtines* were alſo wounded. By his *Lordſhip's Command* I was ſent for to take care of him; but not being at home, Mr. *Chomly* went to him, and in his *Lordſhip's* preſence applied the *external Medicine*, and gave him the *internal* one in a large *Draught* of *Wine* as uſual. After he had taken care of him,

he

he immediately applied himſelf to find me, to give me an account of our *Patient's condition*; but his *Account* was ſo ſcurvy a one, that I was ſorry he had medled with him, which had I been there, I ſhould not have done, by reaſon that my whole *Reputation* lay at ſtake; for it was but *two days* before, that *His Majeſty* had been *Graciouſly pleaſed* to appoint it to be given out in *publick Orders* throughout the *Camp*, that *Notice* ſhould be given to my moſt *worthy Friend*, Sir *Henry Bellaſis*, of the firſt *Man* that was wounded, that he might ſee whether I were capable of performing what I pretended to. Now the *Symptoms* that attended this *Man* were violent *Vomitings*, and an intolerable *Soreneſs* and *Pain* about his *Belly* and in his *Bowels*, and for that *Night* had no reſt at all. In the morning when the *General* ſaw him, his *circumſtances* were little or nothing better; but towards the *Evening* he began to reſt, and before next *Morning* his ill *Symptoms* totally vaniſhed. For *two days* he had no *ſtool*; but when he had one, it was ſcarce any thing elſe but *coagulated Blood*. On the *fourth day* after he was wounded he was able to go with me to *Court*, where the *General* and ſeveral other *Officers* ſaw him very well. Beſides the forementioned *Wound*, he was alſo wounded in two other *places*, and much bruiſed, of all which he was perfectly recovered.

Experiment III.

MR. *Lane*, a *Voluntier* in the *Regiment* of Sir *Bevil Greenvil*, was in a *Rencounter*, run into the *left Pap*: the *Sword*, by all accounts, entred a great way into the *Cavity* of the *Breaſt*. The *Chirurgeon* of the ſaid *Regiment*, was, by the Order of Sir *Bevil*, ſent to take care of him, who preſently returned and told Sir *Bevil*, that he was a *dead Man*, and all the *World* could not ſave him; for that he had no ſooner thruſt his *Probe* into the *Wound*, but that it was beaten back again by the *Pulſation* of his *Heart*: he likewiſe told the ſame to Mr. *Willy Chirurgeon* to the *Regiment* of *Colonel Selwin*, and to ſeveral others; but withal, in a ridiculing manner, he ſaid, that they might ſend for their *famous Doctor*, meaning me, and if he could *cure* him, he would then fight *Duels* every day: I was ſent for, but being ill could not go; ſo I ſent Mr. *Chomly*, who notwithſtanding his ill *Circumſtances*, and being animated by what he had before ſeen, was not afraid to take him into his *care*; tho the *Symptoms* that attended him were as bad as bad could be, and he alive. He had great *Convulſions*, *ſhortneſs* of *Breath*, a great *Load* upon his *Diaphragme*, and a great quantity of *ſpumous Blood* guſhed out at the *Orifice* of his *Wound*, together with ſuch a *Blaſt* of *Air*, that it was almoſt equal to that of an ordinary *Pair* of *Bellows*: He applied the *external Medicine*,

 and

and gave him the *internal* one, which immediately gave him ſome *relief*; but for *forty eight hours* my Friend Mr. *Hamſtead* was forced to keep a *Guard* upon him, for fear the *Chirurgeons* ſhould do him a *miſchief*, they having before attempted to play me ſome *ſlippery Tricks*. At the end of which time Mr. *Lane* ſent me word, that he could lie upon the wounded *Part* without the leaſt *pain*; and that my *Friend* need not give himſelf any more trouble, he being as well as ever in his *Life*, only weak with the great loſs of *Blood*: Accordingly my *Friend* left him. But on the *morrow* in the *Evening* there came to him between *twenty* and *thirty Chirurgeons*, who by violence (I ſuppoſe having before made him drunk) pulled of the *Dreſſings* from his *Wound*, with no other deſign, that I can imagine, than to murder him, by reaſon they applied nothing elſe in its room, but left the *Wound* bare; in which poſture it continued all *Night*. My *People* going next *Morning* to viſit him, he told them the *Story*; and withal ſaid that every thing was well, his *Wound* being ſo far healed before, that their pulling off the *Dreſſings* did him no harm: however, my People made another *Application*, which, to the beſt of my remembrance, was the ſecond and laſt that was made. But from the beginning he took the *Tincture* once in *five* or *ſix hours* in a large *Draught* of *Wine*. I have ſince ſeen him on the *long march*, walking on *foot*, when he told me he was as well as ever in his Life. This *Man* had as ill an habit of *Body*, as it was poſſible for a *Man* to have.

Experiment IV.

MR. *Fletcher*, a *Lieutenant* in *Colonel Fitz-Patrick's Regiment* of *Fuſileers*, was in a *Rencounter* run through the moſt fleſhy part of his right *Thigh*; after the *Sword* was in up to the *Hilt*, he and his *Antagoniſt* cloſed, and down they fell upon the Ground, where they continued ſtrugling for a conſiderable time, the *Sword* being ſtill in Mr. *Fletcher's Thigh*: but *Company* coming in, they parted them, and pulled out the *Sword*, and ſent for Mr. *Chomly* to take care of him; who, when he came, found the *Orifices* on each ſide, at leaſt *three Inches* long, and very wide; from which proceeded a very great *Flux* of *Blood*. He firſt ſqueezed ſome of the *Solution* of my *Pouder* into the *Wound*, then ſtitched it up, and applied ſome *Pledgets* of *Tow*, wet in the ſaid *Solution*, to both *Orifices*; afterwards he gave him the *Tincture* in a *Glaſs* of *Wine*, which was repeated once in 5 or 6 *Hours*, for *three Days*. In one *Week's* time he was able to walk abroad; he publickly declar'd that from the firſt time my *Medicines* were applied, he felt no more *Pain* in or about the *Wound*, than if he had never been hurt at all.

Experiment

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Experiment V.

MR. *Poole*, a private *Gentleman*, in the Honourable *Brigadier Lumley's Regiment*, in the *Troop* of *Captain Billingſly*, was near his *Majeſty's Quarters* at *Roſebeck*, with a *Sword* run into the *Stomach:* he had immediately a very great *Flux* of *Blood*, both at the *Wound*, and at his *Mouth*; but that at his *Mouth* was by much the greateſt. Several of the *Servants* belonging to his *Majeſty*, who ſaw him bleeding, do poſitively declare, that according to the moſt modeſt computation, he at both places loſt *two Field-meaſures*, which is *four Engliſh Quarts* of *Blood*, before my People came to him. He was *convulſive* to ſuch a degree, that all who ſaw him, thought it impoſſible for him to live an hour: but my *Medicines* being uſed according to the uſual *Method*, the *Flux* of *Blood* immediately ſtopped; and he, as almoſt all my *Patients* have done, declared that within a *minute* or two after he had taken the *Tincture*, he found himſelf refreſhed and revived beyond expreſſion; and preſently his *Convulſions* left him, and that *Night* he ſlept very well. On the morrow a *Rumor*, by whom raiſed I know not, was ſpread about the *Court*, that he was dead; but my Friend Mr. *Sell*, a *Page* of the *Back-ſtairs* to His *Majeſty*, going to the *Tent* where he lay to enquire into the truth of the Report, inſtead of

finding him dead, ſaw him heartily knawing of tough, ill boiled *Mutton*, the which he forbad him to do; ſo he left off, but withal ſaid, *Sir, if I muſt not eat, I'll drink to you*; ſo he took up a *Quart Pot* of *ſtrong Mecklin Beer*, and drank it off. About three days after the *Army* marched from *Roſebeck* to *Mount St. Andrew*, and he in a *Waggon* to *Tirlemont*: But on the *morrow*, there being a *Rumor* that the *Army* was to engage, he came from *Tirlemont* to the *Camp*. His *Captain* asked him what he did there; he anſwered, *That he came to fight*: replied the Captain, *Sure you have enough of Fighting already*; *no* (ſays he) *I fear not Fighting now, and altho I was ſo lately wounded, and loſt ſo much Blood, I am as able to fight as any Man in the Regiment*. This Diſcourſe between his *Captain* and him he told me of on *Sunday Morning*, which was but *five Days* after he was wounded. About *eight Days* after he was wounded, he was ſeen by His Majeſty and ſeveral great *Officers*, he being then very well, and ſo continued till I left the *Camp*.

Experiment

Experiment VI.

A Private *Soldier*, in the *Regiment* of *Colonel Collingwood*, had with a *broad Sword*, his *Sternum* or *Breaſt-bone* divided; the *Sword* likewiſe paſſed on into the *Body* of his *Lungs*. From the *Wound* ruſhed forth ſuch a vaſt *Quantity* of *Blood* and *Air* together, that Mr. *Chomly* declared, that he could ſcarce with his *Hand* keep on a *Dreſſing*; ſo to bring the *Lips* of the *Wound* together, with a *Needle* and *Thred* he ſewed up the *Wound:* but the Force of *Air* was ſo great, the *Flux* of *Blood* being before ſtopped by my *Medicines*, that he was forced to make his *Stitches* in the external part of the *Bone*, which is *griſtly*, by reaſon that the *Skin* was not ſtrong enough to hold them. The Man was for that *Night* attended with moſt dangerous *Symptoms*; but on the *Morrow*, he continuing to take the *Tincture*, they left him: He continued in the *Camp three Days* very well, only weak with the great *Loſs* of *Blood*. The *Army* being to march, his *Weakneſs* was ſuch, that he could not walk far on foot; ſo, contrary to my knowledg, he was ſent to the *Hoſpital*, but wanted no other aſſiſtance there, than to recover his *Strength:* He ſtaid there ſome ſmall time, but is ſince returned to the *Camp* very vigorous and well.

Experiment VII.

A Private *Soldier*, in the *Regiment* of Sir *James Leſley*, was alſo wounded in the *Lungs*; and Sir *James* himſelf told me, that he was by ſeveral *Chirurgeons* given over for dead. His *Wound* had been a *Fortnight* or more received, and was in a very ill *Condition*; he had a great quantity of *Blood* diſcharged into the *Cavity* of his *Breaſt*, which lying there for ſo long a time, was degenerated into the moſt ſtinking ſort of *Pus* or *Matter*: he had likewiſe a moſt violent *Fever*. Yet notwithſtanding his Condition was ſuch, by the repeated uſe of my *Tincture*, he was in *twenty four Hours* freed from his *Fever*, and had all the corrupted *Matter* thrown out of his *Breaſt*; and his *Wound*, with twice applying my external *Medicine*, in a *Week's* time was well.

Experiment

Experiment VIII.

MR. *Wright*, a *Quarter-maſter*, in the *Regiment* of *Colonel Langſton*, was with a *Sword* run in juſt below the right *Arm-pit*; the *Sword* paſſed in through the middle of the *Lungs* about *ten Inches*. He had immediately a great *Flux* of *Blood*, both at the *Wound* and at his *Mouth*, with a great *ſhortneſs* of *Breath*, and violent *Convulſions*. *Lieutenant Colonel Morton* being at hand, and having ſome of my *Medicines* by him, ſent his *Man* for them; which when he had brought, he gave him Directions how to apply the *external*, and to give the *internal* one. The *Colonel* told me afterwards, that he never before ſaw ſo ſudden, and ſo great an *Alteration* in any one in his whole Life: For that juſt before he took the *Tincture*, he had ſuch violent *Convulſions*, and ſuch a *ſhortneſs* of *Breath*, that himſelf and all that ſaw him, thought him near expiring; but in a few minutes after he had taken it, thoſe *Symptoms* totally left him. But the poor *Gentleman* fearing that ſomething might be omitted, he ſent for me; but I being at that time otherwiſe buſy, ſent Mr. *Chomly* and Mr. *Hamſtead* to him, who found that every thing was well: but for ſecurity ſake, Mr. *Hamſtead* ſtayed that *Night* with him, and in the *Morning* he brought me word, that for the firſt part of the *Night* he was ſomewhat

what reſtleſs; but about *two* a *Clock* he began to ſleep, and continued ſleeping till he came away. That *Day* I went to viſit him, and found him in a very good condition, free from a *Fever*, or any diſorder in or about his *Wound*, only ſpit *Blood* a little, which, I ſuppoſe, was occaſioned by a *Cough* he had upon him for *ſeven Years* before, which being *violent*, beſides the ordinary *Motion* of his *Lungs*, muſt neceſſarily much impede the healing of them when wounded: Notwithſtanding which, in *four or five days* he was able to walk abroad, being very well, only weak with the great *Loſs* of *Blood*. *Six Weeks* ſince he was wounded, I frequently ſaw him at *Ghent*, when he told me, he was as well as he had been for ſeveral *Years* before.

Experiment IX.

A Soldier in the *Regiment* of the Right Honourable the *Lord George Hamilton* (now Earl of *Orkney*) being out a foraging, was with a *Bullet*, or rather *two*, ſhot through the back part of his *Hand*; the *Bones* of the *Meta Carpus* were all ſhattered to pieces, and the *Tendons* much torn, which we could plainly ſee, the *Wound* being ſo very wide. The *Wound* was firſt dreſſed by Mr. *Willy Chirurgeon* to the *Regiment* of *Colonel Selwin*, being received about *ten* a *Clock* in the *Morning*. I being that *Afternoon* at His *Majeſty's Quarters*, and ſeeing my *Lord*,

Lord, he told me of the *Accident*, and withal desired me to take care of the *Man*: Accordingly, about *nine* a *Clock* in the *Evening*, I went to his *Tent*, and there sent for Mr. *Willy*; who when he came, told me, that the *Man's Hand*, by the common *Methods*, could not be saved; but if I could do it, he would then stand my *Friend* against all my *Opposers*: So I requested him to pull of his *Dressings*, which were only *Pledgets* of dry *Tow*; which when he had done, Mr. *Chomly* applied my external *Medicine*, and gave him the *Tincture* in a large Draught of *Old-hock*. His *Hand* and *Arm* were much swelled and inflamed, and he in most intolerable *Pain*. On the *Morrow* I went again to see him, and found both *Swelling* and *Inflammation* gone, and he at ease. About *four Days* after Mr. *Chomly* opened the *Wound* again, to make a fresh *Dressing*, which we found in a very good *Condition*, and not in the least digested, or brought to *Suppuration*; but a thin, serous *Matter*, a little tinged with *Redness*, which I suppose to be discharged out of the *Glands* and *lymphatick Vessels*, came away, which when it had lain some time upon the *Dressings*, was subject to stink; but that which came fresh out of the *Wound*, was as sweet as a *Rose*: This *Substance* was quite different from what we call *Gleet*. The next time it was drest, it looked better than before, and he could begin a little to stir his *Fingers*; at this *Dressing* (his *Comrade* next to be mentioned, being also then dressed) a great many *Gentlemen* and *Chirurgeons* out of Curiosity, were by, who all declared they never saw any *Wounds* look so well

well in their lives; and then this Man could ſtir all his *Fingers*. Within a few *Days* the *Army* began to march, and he marched every *Day* of the long *March* on *Foot*, unleſs it were the firſt *Day*, when I got leave for him, and his *Comrade* in *Affliction*, to ride *three* or *four Miles*: Before we came to the end of the long *March*, he told me, that he could lay the wounded *Hand* upon the *Back* of a *Horſe* of *fifteen Hands* high, and without any other aſſiſtance, leap up upon his *Back*. He had at ſeveral times, at leaſt *fifty* ſmall pieces of *Bones* came away; and after they were all diſcharged, his *Hand* was ſuddenly well.

Experiment X.

ANother *Soldier* of the ſame *Regiment* was at the ſame time with the forementioned *Perſon*, wounded in *three places* of his *Body*. He had two *Bullets*, at about an *Inch* and half diſtance, entered about the middle of his *Back* on the right ſide, and were cut out by Mr. *Willy* about *ſeven Inches* from their *Orifices* on the ſame ſide. Another *Bullet* entered a little below on the ſame ſide, and was cut out juſt above the *Navel*, being about *nine Inches* from its firſt *Entrance*; tho the other two had not, grazing upon the *Ribs*, yet I have great reaſon to believe that this did penetrate the *Cavity* of the *Body*. This Man we found in moſt intolerable *Miſery*, having

having a violent *Fever* upon him; and the laſt mentioned *Wound*, in all appearance, began to mortify, both *Orifices* looking very black, and a very ill *Smell* came from them. Mr. *Chomly* applied my external *Medicine*, and gave him the *Tincture*, which, according to the uſual Cuſtom, was repeated once in *five* or *ſix Hours*. His *Pain* and *Fever* laſted about *thirty Hours*, when they both left him, and in *three* or *four Days* he walked abroad. When he was next dreſs'd, which was about *four Days* diſtance from the firſt *Dreſſing*, the two firſt mentioned *Wounds* looked very well, but the *laſt* not ſo well. But at the third *Dreſſing* there came out of the laſt *Wound* a great many Pieces of his *Clothes*, and that without any *Digeſtion* at all, only a great *Quantity* of the forementioned ſerous *Matter* came from all the *Wounds*. In about *three Weeks* time all the *Wounds* were filled with good *Fleſh*, and only wanted skinning; but then being forced to march with the *Army* on *Foot* for a great many *Days* together, the great *Motion* of his *Body*, with the moving of his *Clothes*, fretted the wounded *Parts*, and kept them from skinning, and likewiſe cauſed a little proud *Fleſh* to grow up, which, when he came to have a little Reſt, preſently vaniſhed, and the *Wounds* were preſently well.

Experiment

Experiment XI.

AN *Enſign*, in the Honourable the *Lord Belcaſtle's Regiment*, in defending a *Paſs* againſt a *Party* of *French*, was with a *Muſquet Bullet* wounded in the Head; the *Bullet* entred a little below the *Temple*; it paſſed on, and tore the *temporal Artery* aſunder, and grazed further upon the *Skull* about *four Inches*. By the *Order* of His *Majeſty*, I went to take care of him; when I came to him, I found that he had been dreſs'd by the *Chirurgeon* of the ſaid *Regiment*, whom I ſent for to pull off his *Dreſſings*, which were hard *Doſſels* of *Tow* dipt in *Spirit* of *Wine*, he having cramm'd the *Wound*, which was an *Inch* wide, with them as full as it could hold. After his *Dreſſings* were off, Mr. *Chomly* applied my external *Medicine*, and gave him the *Tincture*. His *Head* and *Face* were much ſwelled, and he ſomething Feveriſh. On the *morrow* I went to viſit him, when the *Swelling* of his *Head* and *Face* was quite gone, and his *Fever* left him; and in about a *Fortnight's* time his *Wound*, tho ſo wide, without being brought to *Suppuration* at all, was perfectly well. In the mean time he never confin'd himſelf to his *Tent*, but marched on *Foot* with the *Army*, and declared, that from the firſt time my *Medicines* were applied, he felt no more *Pain*, than if he had never been hurt at all.

Experiment

Experiment XII.

A Private *Soldier*, in the *Regiment* of the Honourable *Major General Le Mullinier*, was at the ſame time with the forementioned *Officer*, wounded; but of him I had no notice given me till the *Morrow*, when the *Major General*, I being at the *Officer's Tent*, ſent to me, to deſire me to take care of him. I found he had before been dreſs'd by the *Chirurgeon* of the *Regiment*; ſo for him I ſent to pull off his own, and apply my *Medicines*, Mr. *Chomly* not being then with me. The poor *Man* had one *Muſquet Ball* entered at the Corner of his right *Eye*, and paſſing through the *Os Spongioſum*, or *ſpungy Bone* of the *Noſe*, came out at the left *Eye*, tearing that *Eye* all to pieces. Another *Bullet* entered at the laſt *Orifice*, paſſed through the upper *Mandible*, or *Jaw-Bone*, and came out at the Corner of the under one. Theſe *two Wounds* were crammed as full as they could hold with hard *Doſſels* dipt in *Spirit* of *Wine*, which I ordered to be pulled out: which altho it were perform'd with the greateſt difficulty imaginable, and putting the poor *Creature* to moſt intolerable *Pain*; yet his *Bravery* and *Undauntedneſs* of *Spirit* was ſuch, that he never ſo much as once ſmayed at it all the time it was doing. After the *Chirurgeon* had, as he ſaid, pulled out all the *Doſſels*, I deſired him to inject ſome of the

Solution

Solution of my *Pouder* through both the *Wounds*; through the firſt mentioned *Wound* it paſſed very well: but tho we tried at both the upper and lower *Orifice* of the laſt, we could not get any through; ſo I concluded there muſt be ſtill ſome *Doſſels* behind, as it afterwards appeared; but the *Wound* being very deep, he could not come at ever a one with his *Forceps*; ſo were we forced to bind it up as it was. His *Head* and *Face* were ſwelled to ſuch a prodigious *Bigneſs*, that he looked like a *Monſter*. He had likewiſe a violent *Fever*, which by the taking of my *Tincture* was ſoon abated, and in *two Days* the *Swelling* of his *Head* and *Face* was quite gone down, and he free from any *Pain* at all, altho there were ſtill three large hard *Doſſels* left in the laſt mentioned *Wound*. About *five Days* after he was wounded, the *Army* began to march, and he on *Horſe-back* marched with the *Army* the whole *March*; and tho he were expoſed to *Wind* and ill *Weather*, yet felt no *Pain* or *Diſorder* in or about his *Wounds*. About the ſixth *Day* of the *March*, Mr. *Chomly* having pulled off the *Dreſſings* to make freſh ones, the *Doſſels* of the thickneſs of a *Man's Thumb* came out at the upper *Orifice* of the laſt *Wound*, without any *Trouble* or *Pain* at all: All that time the lower *Orifice* was almoſt cloſed up, and afterwards the upper one began to mend apace, and in a little time his *Wounds* were all cured, and he is now in this *City* very well, and his *Face* not in the leaſt *disfigured*, only the Loſs of his *Eye*.

Experiment

Experiment XIII.

MR. *Lorridg*, a *Lieutenant* in the Honourable *Brigadier Lumley*'s *Regiment*, in a *Rencounter* received a ſlight *Wound* under the *right Arm-pit*, the *Axillary Artery* being alſo pricked, upon which enſued a large *Flux* of *Blood*, which was ſoon ſtopped, or rather pent in by Mr. *Engliſh*, *Chirurgeon* to the *Regiment*. He was for about a *Month* managed by Mr. *Engliſh*, and Mr. *Hall*, principal *Chirurgeon* to the *Engliſh Hoſpital*: At the end of which time he had a freſh *Flux* of *Blood*; and before he had any Help come in, I ſuppoſe, by what I ſaw in the *Bed*, and in his *Breeches*, he loſt *ſeven* or *eight Pound* of *Blood*: At laſt the *Chirurgeon's Mate* of the *Regiment* coming, with a very ſtreight *Ligature* he ſtopped the *Bleeding*; which when he had done, he ſent for Mr. *Hall*, who immediately came, but ſeeing how the caſe ſtood, he ſent for ſome of the moſt eminent *Chirurgeons* in *Ghent*, where the *Lieutenant* then was, to his aſſiſtance. They were at leaſt *five Hours* uſing their utmoſt *Endeavours* to ſtop the *Flux* of *Blood*, which, tho they had ſeveral times uſed red hot *Irons*, they could not do. At laſt Mr. *Hall* came to me, and deſired me to go along with him; which, tho I very well knew that upon all occaſions he had ſpoken very reproachfully of me, I readily granted. When I came to the Place where the poor *Gentleman*

was, I found him in a moſt deplorable *condition*, his *Arm* being ſwelled in a moſt prodigious manner, and abſolutely mortified, by their hard *Ligature*, from his *Fingers ends* to his *Shoulder*, and his *Spirits* ſo exhauſted by the loſs of *Blood*, and the intolerable *Pain* they had put him to, that it was altogether impoſſible he ſhould ſurvive many *Hours*: yet when the *Ligature* was never ſo little looſned, the *Blood* ruſhed forth with as much *violence*, as, I believe, it had done at all. However, to be ſerviceable to an honeſt *Gentleman* in *diſtreſs*, in any manner that I could, I prepared my *external Medicine*, which Mr. *Hall* applied; then I ordered the *Ligature* to be undone, and the *Blood* ſeemed to be ſtopped: but in a *minute's* time, or thereabouts, a ſmall quantity of *Blood* iſſued forth, which we all concluded was occaſioned by the *Medicine's* not ſufficiently coming at the *Mouth* of the *Artery*, which was ſo drawn up, the *Artery* being then totally divided, that the *end* of ones *Finger* would ſcarce reach it; but be it how it would, for ſecurity's ſake we pulled off that *Dreſſing*, and made a ſecond, which totally ſtopped the *Flux* of *Blood*, without any *Ligature* or *Compreſs* at all. He lived about *five Hours* after; and tho he was very reſtleſs, and ſtruggled very much, yet there did not one *Drop* of *Blood* more appear. I only mention this *Experiment*, to demonſtrate to the *World* upon what ſlight *Occaſions* many loſe their Lives by the *common Methods*, and how eaſily ſuch *Accidents* may be prevented, if my *Medicines* are timely enough, and regularly uſed; as in the caſe of this poor *Gentleman*: for had

 my

my *Medicines* been uſed before his *Arm* had been mortified by their hard *Ligature*, the *Flux* of *Blood* would as eaſily have been ſtopped; and then he could not, morally ſpeaking, have miſcarried.

Experiment XIV.

I Being at a *Coffee-houſe* in *Ghent*, Sir *William Ruſſel*, a *Captain* in the *Regiment* of *Colonel Coy*, came to me, and deſired me to meet him in the *Afternoon* at a *Tavern*, to look upon a *Man's Hand* of their *Regiment* that was hurt, which I readily granted. In the *Afternoon*, according to my promiſe, I went to the appointed *Tavern*, where I found him and the *Trooper* together. After I had examined the *Man* about his *Wound*, which had been received a *Fortnight*, his Hand and *Arm* being prodigiouſly ſwelled, mightily inflamed, and he in moſt intolerable *Pain*; I deſired him to ſend his *Comrade* for the *Chirurgeon*, who had before looked after it, which accordingly he did; but the *Chirurgeon* either would not, or was aſhamed to come. So, at his requeſt, I opened the *Wound* my ſelf, which I found in a moſt lamentable *condition*, and began to mortify. The *Sword* entered about the middle of the *Palm* of his *Hand*, and came out again at the top of his *Wriſt*, the *two Orifices* being about *ſix Inches* aſunder. The *Wound* being ſo very deep, I ſent my *Boy* for a *Syringe*, and with that I injected ſome of the

Solution of my *Pouder* through the *Wound*, and afterwards gave him a large *Dose* of the *Tincture* in a *Glass* of *Wine*. We had not sate above a *Quarter* of an *Hour*, but the poor *Man* pulled off his *Hat*, returning me *Thanks* in the most affectionate manner imaginable, saying, *Sir, when I came into your Company, I was in most intolerable Pain and Misery, from which I was not to expect deliverance, but by the loss of my Arm*; *but am now as much at ease as ever I was in my whole Life*. This was about the *twenty third Day* of *September*; and since my return to *England*, I have received a most obliging *Letter* from Sir *William Russel*, dated the third of *October*, wherein he tells me, that contrary to his expectation, the *Man's Hand* was perfectly well.

[I could add a great number of *Cures* wrought both in *London*, and several other Parts of *England*, since the first *Publication* of this *Tract*; but those who won't be convinced by those already mentioned, will not be convinced should I add a *hundred* more.]

DIREC-

DIRECTIONS *for the uſe of the* Vulnerary Pouder, *and of the Tincture of the Sulphur of* Venus.

SUch a *Quantity* of the *Pouder* as will lie upon half a *Guinea*, may be diſſolved in two or three *Spoonfuls* of warm *Water*; where that can not be had, you may take *Urine*. And in this *Solution* you may wet a *Pledget*, that is made either of fine *Tow* or *Lint*, with which *Pledget* you may lightly dab the *Lips* of the *Wound*, and then ſqueeze a ſmall quantity of the *Solution* into the *Wound*. Then you may apply your *Pledget*, and bind it on. If the *Wound* be an inciſed one, after the *Medicine* is ſqueezed into it, it will be convenient to ſtitch the *Lips* together with a *Needle* and *Thred*, and then apply the *Pledget*. Now in inciſed *Wounds* when theſe *Medicines* are applied as ſoon, or a little time after the *Wound* is received, one *Dreſſing* is for the moſt part ſufficient, but two are as many as ever need be uſed. The ſecond *Application* to be made at the end of *three* or *four Days*: But in *Gun-ſhot Wounds*, or where

there is great Loſs of *Subſtance*, more *Dreſſings* are needful, and to be repeated once in about *four Days*. If the *Wound* be very deep, whether it be an inciſed or a *Gun-ſhot* one, inſtead of ſqueezing in of the *Solution*, it is neceſſary that it be injected with a *Syringe*.

As for the *Tincture*, in all very large fleſh *Wounds*, and thoſe within the *Cavity* of the *Body*, it ought to be taken once in *five* or *ſix Hours*, and continued for *four* or *five Days*: The *Doſe* is half a *Spoonful* in a *Draught* of any good *Wine*, but *Old-Hock* I find beſt. In ſlight *Wounds* to be taken *twice* a *Day* for *two* or *three Days*. Tho if it be taken for a longer time, it can be no way prejudicial, but the quite contrary.

In great *Fluxes* of *Blood* it will be convenient for to hold on the *Pledget* wet in the *Solution* of the *Pouder* with your *Hand*, till the *Flux* of *Blood* ceaſeth, which in the greateſt will [for the moſt part] be in a ſmall time, and afterwards to uſe very eaſy *Bandage*.

[I have obſerved, that in thoſe *Wounds* where there is little or no *Flux* of *Blood*, the weaker the *Solution* is made, the better; and where there are large *Fluxes* of *Blood*, for the ſtopping of them the *Solution* muſt be made as ſtrong as may be: but after that is done, a *weak Solution* will ſooner finiſh the *Cure* than a ſtrong one.

Where

Where there is only a *Cicatrix* wanting, or for the *Cure* of old *Ulcers*, I have found a ſmall quantity of the *Pouder* diſſolved in the *White* of an *Egg* (the which it will immediately turn into a ſtiff *Gelatinous Subſtance*) to do much better than when it is diſſolved in any other *Liquor*.]

From my Houſe in Villers ſtreet, York Buildings.

FINIS.

Novum Lumen Chirurgicum Vindicatum:

OR, THE

NEW LIGHT OF CHIRURGERY VINDICATED

From the many unjuſt Aſperſions of ſome unknown Calumniators.

With the Addition of ſome few *Experiments* made this Winter, being $169\frac{4}{5}$, in *England.*

By JOHN COLBATCH, *Phyſician, a Member of the College of Phyſicians,* London.

The Second Edition.

LONDON,

Printed for *D. Brown,* at the *Bible* and *Swan* without *Temple-Bar,* 1698.

To the Honourable WILLIAM BLAITHWAYT, Eſq; Secretary of War.

SIR,

MY *Adverſaries* having dedicated a *Piece* to You, wherein they deſire Your *Patronage* of *Truth*, which they pretend to be on their Sides; I alſo being ſufficiently ſatisfied that the *Greatneſs* of Your *Soul* is ſuch, as not to be amuſed with ſpecious *Pretenſions*, have preſumed alſo to dedicate this *Piece* to You; which, altho I have not had

had time to put into any Order, yet it contains moſt indiſputable *Truths*.

I beg not any other *Favour* of You, than if *Truth* inclines to my ſide, that You will afford me Your *Patronage*, which my own *Experience* is ſufficient to aſſure me, that my *Requeſt* will be as readily granted as deſired. I am,

SIR,

Your moſt Obliged

and Obedient

Servant to command,

JOHN COLBATCH.

TO THE READER.

ON *the* 18*th day of this inſtant* April 1695, *there came to my* Hands *a little* Libel *ſet forth by my* old Friends *the* Surgeons. *At firſt I thought it would not be worth my ſpending any time in writing an* Anſwer *to it; till at laſt I concluded, That if I ſhould be altogether ſilent till the end of the* Campagn, *they might in my* Abſence *triumph amongſt themſelves, and make the unthinking Part of the* World *believe that I had given up my* Cauſe, *and yielded all for loſt. To prevent which, I have (in the midſt of my Multiplicity of Buſineſs) ſpent a few* Hours *in compoſing the following little* Tract; *the which I muſt own to be full of many* Imperfections, *yet contains nothing but* Truth: *and therefore for* Truth's *ſake, I doubt not but the* Candid Reader *will paſs over thoſe other Failings that he may meet with.*

The

The Charges laid againſt me are very numerous; and were they but as true, I muſt of conſequence be the moſt vile Creature alive. But I having been uſed ſo much to the Scurrility *of ſome of that* Fraternity, *there is nothing but I can bear from them. And indeed I ſhould be to blame, if I ſhould not be content to give Loſers leave to ſpeak; and ſo much the more, by reaſon that their* Diana *(I mean their ill Practices being detected, the World will be ſo wary, as to have a care of them) is falling into* Diſgrace; *to keep up whoſe* Reputation *(tho to the great* Prejudice *of* Mankind) *they will not fail to make their utmoſt* Efforts. A drowning Man will lay hold on every Twig. *To be ſure, if making a Noiſe, and uſing ill* Language, *will do any thing towards the Preſervation of their ſinking* Credit, *that ſhall not be wanting.*

As I have before ſaid, ſo I repeat it again, That both the City *of* London, *and the* Engliſh *Army afford a great many* Surgeons, *who are Men of* extraordinary Worth, *from whom I have received many Civilities; and inſtead of being diſcouraged by them, I have been to the utmoſt of their Powers aſſiſted in carrying on my Deſigns.*

I have had occaſion to mention Mr. Bernard's *Name, which I could not poſſibly avoid: But I am ſo far from charging him with*

with any thing that is unfair, that there is nothing more; for I cannot hear of any one who hath at any time heard him say, That the Man *at the* Hospital *bled again after my* Pouder *was applied, and had stopt the* Flux *of* Blood. *Nay, I have been informed, that he was altogether against the* publishing *of that scandalous* Libel, *telling the* Authors, *that it was in vain to write against* Matter *of* Fact. *Whether this* Relation *be true or not, I am not certain. But this I am sure of, that he is a very* great Man, *and the* Honour *of his* Profession: *And I verily believe he scorns a mean* Action. *I heartily wish I could say the same of Mr.* Cooper *and others, from whom I never deserved ill.*

There was scarce an Experiment *I made* last Year *in* Flanders, *but there were several* Officers Spectators; *so that if I had not performed what I pretended to, I must quickly have been detected. But I thank* God, *my* Success *was such, that I have gained the* good Will *of most* Officers *of the* Army, *whose Words will (I suppose) go farther with all considerate* Men, *than the* scandalous, malicious Reports *of some interested* Surgeons.

[*Altho I have no immediate* concern *in the* Medicines *here recommended, yet my* Reputation *as much depends upon the* Success *or* Non-

Non-ſucceſs *of them, as if they were ſtill at my own diſpoſal; and therefore I think I am obliged to acquaint the* World, *that the* right ones *are only to be had of Mr.* Brown *the* Bookſeller, *and Mr.* Raddiſon, *the* Perſons *only depated to diſpoſe of them by the preſent Poſſeſſor.*

There are ſeveral Perſons *about the* Town, *who have endeavoured to imitate theſe* Medicines, *and afterwards to ſell them in my* Name; *but whoſoever ſhall buy any, except of the* Perſons *before mentioned, when they find themſelves fruſtrated in their* Expectations, *I hope they will not blame me, having given them this fair Warning.*]

From my Houſe in Villers ſtreet, York Buildings, September 22*d*, 1697.

Novum Lumen Chirurgicum Vindicatum:

OR, A

VINDICATION of the *New Light of Chirurgery.*

THere having lately ſtoln out into the *World* a *ſcandalous Libel*, Entituled, *Novum Lumen Chirurgicum Extinctum*, wherein the *Author*, or rather *Authors* (I being very well aſſured, that it was compoſed by a *Club* or *Cabal* of *Surgeons*) pretend to ridicule notorious and known *Matter* of *Fact*. He or they pretend to detect *Impoſture*, and to vindicate the *Cauſe* of *Truth*: If ſo, I leave it to the impartial *Judgment* of any rational, ſober *Perſon*, whether the *Author* or *Authors* had any reaſon to have concealed their *Names*. I confeſs there are the two initial *Letters* of a *Perſon's Name* prefixed to the *Title Page*; which if they anſwer to the *Perſon* whom I have ſome reaſon to ſuſpect, if his *Name* had been written at length, his *Life* and *Converſation* are ſo very ſcandalous, (he having laſt *Year* been caſhier'd the *Regiment* to which he belonged, for his ſcandalous way of *Living*, as I have been credibly informed by ſome of the

Officers of the ſaid *Regiment*) that it had been ſufficient to have deterred any one from reading any more than the *Title Page* alone.

The *Authors* have taken care to ſend this *Libel* into the *World* at a time, when I am full of buſineſs in making my *Preparation* for *Flanders*, and juſt upon the point of going away, and ſo not capable of writing ſo full an *Anſwer* as otherwiſe I would have done, and which may be expected at the end of the *Campagn*; and alſo when the *Officers* of the *Army*, who would have been my *Compurgators*, are gone out of *Town*.

Mr. *Hall*, *Surgeon* to the Honourable *Colonel Fitz-Patrick's Regiment* of *Fuſileers*, who had a conſiderable hand in writing this *Piece*, brings in the *Major*, and *two Captains* of the ſaid *Regiment* to juſtify a moſt notorious *Untruth*: of which, when it ſhall come to their knowledg, I ſuppoſe he will have ſufficient cauſe to repent.

As for what is ſaid by them concerning the *Dogs* wounded before the Right Honourable the *Lord Cuts*, and the *Soldier* that was wounded upon *Tower-Hill*; if I had time, I could ſufficiently make appear the *Truth* of every tittle I have ſaid in my *Preface* upon that *Subject*; and whoever will give himſelf the trouble of going to Mr. *Sterkey Surgeon* upon *little Tower-Hill*, he will ſatisfy them that the Man's Caſe was moſt deplorable, and quite contrary to what they relate.

They ſay I have deſerved ill of moſt *Surgeons*; which is no otherwiſe true, than if to be civil, and ſhew *Reſpect* in the higheſt degree, be to deſerve ill. For I defy any one of that *Fraterni-*

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ty to ſay, that I ever once denied them to ſhew what *Experiments* they deſired, and to let them ſee my *Patients* dreſſed upon all occaſions. And ſince Mr. *Cooper* is by them trump'd up in relation to the *Experiments* made at St. *Bartholomew's Hoſpital*; I ſhall repreſent that whole Buſineſs to the *World*, and then leave it to any impartial *Perſon* to judg, whether I was fairly dealt with, or not.

Having made ſome *Experiments* before Mr. *Cooper*, &c. upon a *Dog* firſt of all, making an *Aperture* in his *Abdomen*, then taking out one of his *Small Guts*, and wounding it, of which he was in *three* or *four Days* well: Then we cut off one of his hinder *Legs* as cloſe as poſſibly we could to his *Body*, and immediately ſtopped the *Flux* of *Blood* without any hard *Bandage*, to the great ſatisfaction of all the *Byſtanders*. I was then deſired by one of the *Maſter-Surgeons* of the *Hoſpital*, to try my *Medicines* upon *two Perſons*, who were to have the one a *Leg*, and the other an *Arm* cut off, which I readily granted. The *Day* before theſe *Operations* were to be performed, I receiv'd a Letter from the ſaid *Maſter-Surgeon* of the *Hoſpital*, requeſting me that I would come alone, and bring no one with me, that a *Croud* might be avoided, and his *Brethren* not diſpleaſed, (which I leave to any ones Judgment, whether it did not look as if there were ſome Deſign, as the *Sequel* will demonſtrate) Accordingly I went to the *Hoſpital*, with no one with me but my *Boy* of about *fourteen Years* of *Age*. But (to my great ſurprize) when I came there, I found at leaſt *twenty* of their *Fraternity*.

However, knowing the *Juſtice* of my *Cauſe*, I ſtaid to perform the *Buſineſs* I came about. I confeſs my *Pouder* was *two* or *three* times applied before the *Fluxes* of *Blood* were ſtopped, which was occaſion'd only by the irregular *Application* of it by one of themſelves. But after the *Fluxes* were ſtopp'd, there was no other than mere retentive *Bandage* uſed, which is more than what any of them can pretend to with any of their moſt celebrated *Medicines*. After our *Patients* were dreſſed up, and laid to *Bed*, we went all to the *Tavern*, where every one ſeemed to expreſs very great *Satisfaction* in what had been done. On the *Morrow Morning*, being at *Tom*'s *Coffee-houſe* in St. *Martins-lane* with one Mr. *Clarke*, I met with a certain *Phyſician* who told me that all was undone, for that one of the People had bled afreſh; and if Mr. *Bernard* had not been at hand to have taken off mine, and applied his own *Medicines*, he had *bled* to *Death*. The *Truth* of which I had no reaſon to believe, having ſent one the *Night* before, and another that *Morning*, to make ſtrict enquiry how they both did, who brought me word that they were both very well, but mentioned nothing of any ſuch *Accident*: However, that I might be ſatisfied exactly in the truth of the ſaid *Report*, I immediately went to the ſaid *Hoſpital*, taking Mr. *Clarke* with me. In our way we met Mr. *Blackſtone*, *Apothecary* to the *Hoſpital*, who told me the ſame *Story* the *Phyſician* had done. When we came to the *Bed* where the *Man* lay, whom they ſaid had *bled* again; before I was capable of ſpeaking to him, he

he roſe up in his *Bed*, and prayed for me moſt heartily, telling me that he believed that no *Man*, who ever had an *Arm* cut off, was ſo well as he was: upon which I asked him, whether he had not bled again after I left him; he reaching out his *Stump* to me, did ſolemnly proteſt, that thoſe very *Dreſſings* were the ſame that had been put on in my preſence, and that they had never in the leaſt been touched from the time I ſaw him: I likewiſe asked him how he had been for *Pain*; to which he replied, That for *four* or *five Hours* after the *Amputation*, he had ſome *Pains* occaſioned by an *Inflammation* juſt above the *Stump*; but that he had ſlept very well all *Night*, and was then perfectly at eaſe. We afterwards went up to the *Boy*, who told us the ſame that the *Man* had done, ſaying he was perfectly at eaſe, and had ſlept well all *Night*. Some other *Surgeons* having ſaid the ſame thing in relation to the *Man's* bleeding; I deſired Mr. *Colbatch* a *Stationer* in *Cornhil*, and Mr. *Fiſher* a *Surgeon* in *Alderſgate-ſtreet*, to go to the *Hoſpital*, and they being *Strangers*, the *People* would relate the whole *Truth* to them; but inſtead of either of them owning that they had *bled*, they declared they were infinitely obliged to the *Perſon* who made the new *Experiment* upon them, for that they were well to *admiration*. Theſe *Operations* were performed (to the beſt of my remembrance) on a *Tueſday*; and the *Friday* following I was deſired to be again at the ſame place, to perform the ſame *Operation* upon another *Perſon*: but finding this ill *Uſage*, I ſent Mr. *Baker*, a *Surgeon* in *Suffolk-ſtreet*, who was

wont to make my *Experiments* for me, with ſome other *Friends*, to be as *Witneſſes*, and deſired by Letter, that Mr. *Baker* might make the *Application* of my *Medicines*; but there being ſo many (about *ſix Perſons*) *Witneſſes* of what might be done, they refuſed to let Mr. *Baker* do it, and deferred it to another time. I likewiſe in the ſame *Letter* requeſted that I might have notice given me, when the *two* before mentioned ſhould be opened, that I might be preſent, to ſee how the *Stumps* looked, which every body will own was but fair: But to be ſhort, I was put off from time to time, and never was admitted to ſee them at all. Now, if what I have ſaid upon this *Subject*, does not argue a *Combination*, I do not know what can; and for the truth of all, when I have leiſure, I will have it ſufficiently atteſted before a *Magiſtrate*; nay the *Man* and *Boy* (tho reported to be dead) will both aſſiſt me in the confirmation of the truth of this my *Relation*.

As for the *Caſe* of poor *Captain Rogers*, I know nothing of it, but was told by one *Capt.* of Sir *James Leſley*'s *Regiment*, at Mr. *Man*'s *Coffee-houſe*, before Mr. *Baker* and others, that *Capt. Rogers* being opened after he was dead, his *Heart* was found to be pierced. Whether he ſaw this himſelf, or had it related to him by ſome body elſe, I am not certain; but he declared that to his certain knowledg my *7th Experiment* was true to a tittle, it being made upon a *Soldier* of the *Regiment* to which he belonged.

As for Mr. *Dun*, I know nothing more than this, that he being in a *Publick Coffee-houſe*, where there

there were at leaſt *twelve People*, he complained of *two* or *three Wounds* he had received by a *Cock's Spur*, and that there had been ſomething applied by another *Surgeon*; his *Hand* was much ſwelled and inflamed, and he in great *Pain*, and in great fear of ſome further ill *Conſequence*: ſo he requeſted me to apply my *external Medicine*, which I did, and gave him ſome of the *Tincture* in *Ale*; and in about a *quarter* of an *Hour's* time he declared before all the *Company*, that his *Pain* was altogether abated. On the *Morrow* he came to me again, and deſired me to make a freſh *Dreſſing*, which, finding his *Hand* in a good way of being well, I refuſed; telling him that one *Dreſſing* was ſufficient. Now he being unaccuſtomed to ſuch ſorts of *Methods*, thought I had *ſlighted* him, ſo he applied himſelf to Mr. *Johnſon*, who every body will allow adviſed him to take off my *Dreſſings*, and make uſe of his; ſo what became of him after, I know not.

My time will not permit me at preſent to make Remarks upon the whole, which however I ſhall take a convenient time for. And the *World* may expect a full *Vindication* of my ſelf. For it is *Truth* and its *Cauſe* I am contending for, and therefore am not aſhamed to fix my Name to it. I confeſs (uſing the *Words* of the Famous Dr. *Lock*) *the Imputation of Novelty is a terrible Charge amongſt thoſe who judg of Mens Heads, as they do of their Perukes, by the faſhion; and can allow none to be right but the received Doctrines. Truth ſcarce ever carried it by Vote any where at its firſt appearance: New Opinions are always ſuſpected, and uſually oppoſed, without any other reaſon, but*

becauſe they are not already common: But Truth, like Gold, is not the leſs ſo, for being newly brought out of the Mine. 'Tis Trial and Examination muſt give it Price, and not any antick Faſhion: And tho it be not yet currant by the publick Stamp, yet it may for all that be as old as Nature, and is certainly not the leſs genuine.

I did expect my *Hypotheſis* would have been overthrown, and a better erected in its place, for which I ſhould have thanked them; but inſtead of that, I find they have neither overthrown mine, nor erected a new one of their own, but have ſtood at a diſtance and bark'd at me, ſhewed their *Teeth*, but either durſt not or could not come near enough to bite me in that place where I lay open to them. For in laying down an *Hypotheſis*, it is as in building a *Houſe*, no *Man* can be certain, that he who comes after, cannot erect a better *Fabrick*.

But for my *Experiments*, I relating them as *Matter* of *Fact*, am obliged to ſtand by them; and I defy all their united *Force* in the leaſt to overthrow them.

To the number of my *Experiments*, I ſhall add *two* or *three* made in *England*.

Experiment I.

A *Servant* belonging to one Mr. *Norris*, a *Member* of *Parliament* for *Leverpole* in *Lancaſhire*, driving a *Cart*, by accident fell down before the *Wheel*; the *Wheel* running over his *Head*,

Head, divided the *Scalp* from off all the hinder part of it; and in the *Words* of the ſaid Mr. *Norris*, the *Scull* was altogether as bare, as if ſcraped with a *Razor*, for the breadth of *three* or *four Inches*; his lower *Lip* (by a *Splinter*, or ſome ſuch thing) was divided the length of an *Inch* or more. The *Man* was preſently brought into the ſaid Mr. *Norris*'s *Houſe*, who ſays, that he was the moſt miſerable *Spectacle* that he ever ſaw; but having ſome of my *Medicines* by him, he gave a *Maid-ſervaut* of his *Directions* how to uſe them. She made a *Solution* of my *Pouder* in *Water*, and with the ſaid *Solution* ſhe waſhed the *Scalp* and *Scull*, to free them from *Dirt* and *Sand* that were lodged upon them; then ſhe laid the divided *Scalp* upon its proper place, and bound it up: then ſhe ſtitched up the *Lip*, and made an *Application*. Mr. *Norris* has ſeveral times publickly declared in the *Grecian Coffee-houſe* in *Eſſex-Buildings*, that in *four days* time both the *Man*'s *Head* and *Lip* were perfectly well. He has likewiſe declared, that the *Flux* of *Blood* was ſo great, that he believes he could not have lived, whilſt they had ſent 3 *Miles* for a *Surgeon*, unleſs my *Medicines* had been applied. He ſays that the *Curioſity* of the thing was ſuch, and the *Cure* ſo ſpeedy, that it drew a great many *Surgeons* of the *Country* thereabouts to ſee the *Man*, and to be informed exactly of the *Wounds*, and the manner of *Cure*; who all declared, that they did not believe there had been any ſuch thing in nature; and that if they had been ſent for, they could not have told what to have done. If Mr. *Norris* be gone out of *Town*, there are a great many

many *Gentlemen* who frequent the *Grecian Coffee-houſe*, that have heard him relate this thing. I muſt beg Mr. *Norris*'s Pardon for taking the liberty to uſe his *Name*, without firſt asking his leave; but ſince I have been obliged to it to vindicate *Truth*, I hope it will be the more eaſily excuſed.

Experiment II.

Performed by Mr. Baker *by my Order, which compared with the 13th Experiment in my* Novum Lumen, *is (I ſuppoſe) a Confirmation of the truth of what I there ſay.*

ON the 8th of *March* in the *Evening*, I was ſent for to one *Roger* , a *Corporal* in the *Company* of *Capt. Armſtrong*, in the *Regiment* of *Col. Tiffany*. There was one Mr. *M.* a *Surgeon* in *Bloomsbury* with him at the ſame time, who had dreſſed him from the firſt time the *Wound* had been received, which was about *eleven Days* before, it being given with a large *Bagonet Sword*. It entred about the middle of the *Leg*, between both *Focils*, glancing upon the *Tibia*, and ſo paſſed on, that it went almoſt through: For the *Point* of the *Sword* made a ſort of *Tumour* in the *Calf*; it wounded the *Artery*; but the *Artery* lying very deep, the *Flux* of *Blood* was not very violent. He dreſſed it that time, and ſo on for about *five Days*, it bleeding now and then, but not much, in which time

time the *Wound* was much enlarged; for at firſt he could not have put in above *four* or *five Doſils*; but then *twenty* perhaps or more, as both Mr. *Armſtrong* and all the *Family* told me. On the *fifth Day* it bled with that *Impetuoſity*, that it frighted the whole *Family*: He ſtopt, or rather pent in the *Blood* with good ſtore of *Doſſils* and tite *Bandage*. It continued bleeding thus at times for many *Days*; in which time (as the *Family* told me) he loſt about *twelve* or *fourteen Pints* of *Blood*, even ſo much, that he looked like a perfect *Cadaver*; his *Hands* were ſhrivelled, and as yellow as a *Hawk's Foot*. But on the *eleventh Day* after the *Wound* was inflicted, he *bled* again with the greateſt *Violence* imaginable, which was the reaſon I was ſent for. When I came, Mr. *M.* asked me whether or no I thought I could ſtop the *Flux* of *Blood*. I anſwered, I hope I can: For he had declared before, that nothing but *Amputation* could ſave his *Life*. He then opened the *Wound*, pulling out moſt of his *Dreſſings*; the *Wound* was ſo big, that *four* or *five Fingers* would eaſily have gone into it. The *Dreſſings* were not all pulled away with Mr. *M*'s *Forceps*, but the *Blood* roſe in a moſt violent manner: I can liken it to nothing but to a *Hole* dug in the *Ground* (of about *two Foot Diameter*) over a *Water-pipe*, in which, if you bore a large *Hole*, after the *Ditch* is full to the *Brims*, and runs over, the *Water* boils up in the middle ſomewhat high; juſt ſo did the *Blood*. I put my *Fore-finger* into the *Wound*, could feel both *Bones* very plain (but not the bottom of the *Wound*) with the violent *Pulſa-*

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tion of the *Artery*; I really believe that the *Artery* was almoſt, if not totally divided. The *Leg* was ſwelled to the higheſt degree, the *Blood* being extravaſated, and filling up the *Interſtices* of the *Muſcles* (having been ſo often, both by too tite *Bandage* and *Doſſils*, pent in as it were by main force, till the greater force overpowred, and made its way through all) ſo that beſides the often *Bleeding*, nothing leſs than a *Mortification* was to be feared. But having made my *Application* ready, I injected ſome of the *Solution* of the *Pouder* into the *Wound*, but it was waſhed away by the *Impetuoſity* of the *Flux* before it could arrive to the wounded *Artery*: However, with ſoft *Pledgets* dipt in the *Solution*, I dreſt it up for that time, and the *Flux* ſeem'd to be ſtopp'd; yet it bled ſomewhat that *Night*, but with no great violence, and ſoon ſtopt again. It did ſo twice or thrice, ſo that I was ſatisfied, that unleſs I could empty the *Wound* of the *Blood*, and come to apply the *Medicine* to the *Artery* it ſelf (the Caſe being quite different from what it had been, had the *Wound* been a freſh one, the Parts being all perfectly rotten, as will appear by the Sequel) I had little hopes of ſtaying the *Flux*; upon which I made uſe of the *Turnicat*, compreſſing the *Veſſels* in the *Ham*, which retarded the impetuous *Courſe* of the *Blood*; ſo I emptied the *Wound* as much as I could, and applied the *Solution* with a *Pledget* to the very *Artery*, and filling the reſt with ſoft *Tow*, uſing no *Compreſs*, only retentive *Bandage*. He had little or no *Pain* from the firſt time theſe *Medicines* were applied, except a little *tenſive pul-*

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ſifick Pain before the *Flux* was totally ſtopped. After this *Application*, not one *Drop* of *Blood* appeared, nor did it ever *bleed* afterwards, tho I dreſſed him not in *five* or *ſix Days*; but in the mean time the *Swelling* abated, and from the *Wound* was diſcharged a quantity of coagulated, corrupted *Blood*. I continued dreſſing him with the ſame *Solution* only *four* or *five* times, in which time he was removed from his *Maſter's Houſe* in *Southampton-ſtreet*, *Bloomsbury*, to a *Nurſe's* near *Soho-ſquare*. The *Day* after his *Removal* I dreſt him, and with the *Cloth* that was applied over the *Wound* there came away a large *Core* made up of the contuſed rotten *Fibres*, coagulated *Blood*, and ſome *Doſſils* which Mr. *M.* had left in the *Wound*; this was about *three Weeks* after I had firſt ſeen it. The *Wound* within looked very ruddy and well, but the ſide of the *Tibia* or *Shin-bone* (by which the *Muſculus Anticus* lies) was bare, without any *Perioſtium*, about *two Fingers* in length. There was an extraordinary *Cavity* after the *Core* was diſcharged, and much *Matter* of a very ill *Smell*, which obliged me to dreſs him oftner than uſual; this *Matter* was the extravaſated *Blood*, pent up long between the *Muſcles*, that in this time had formed for it ſelf ſome *Chambers*. Yet in *three Days* the whole contained *Matter* was all come away, the *Leg* fallen to its wonted *Bigneſs*, ſo that you might preſs every Part without any *Pain*; all this while I never put in a *Pledget*, only ſqueezed in the *Solution*, and ſpread the *Pledget* over, covering it with a clean Linen *Rag*, and the former retentive *Bandage* only.

All

All this while I never uſed any thing elſe but the ſaid *Solution* to the diſcover'd *Bone*, which were it a *Cauſtick*, what pretty work would it have made? Afterwards I dreſſed him not above once in *five*, *ſix* or *ſeven Days*; he daily recovered *Strength*, ſo that he roſe, and by degrees walked with a *Stick*, the great *Cavity* being very faſt, full of *Fleſh*, the *Bone* hid, and by the 20*th* of *April* he was quite well. But this is very remarkable, that in the beginning of the *Cure* by me, he took every day the *Tincture* in *White-Wine* or *Claret*, a *Quart* or *three Pints* a day, yet never was in the leaſt feveriſh, altho at the ſame time he never had a *Stool* for *eleven Days*, but always ſlept well, and gained *Strength*.

I mention nothing here to derogate from the former *Surgeon*, who every one will allow, deſerves well in ſending for *Aſſiſtance*, when he was put to a *Nonplus*.

ROBERT BAKER.

Experiment

Experiment III.

ON the 14*th* of *January*, 169$\frac{4}{5}$, *David Hunter*, *Waiter* at the *Roebuck Tavern* in *Great Suffolk-ſtreet*, in a *Scuffle* received a large *Wound* quite croſs the *Carpus* or *Wriſt*, in which the *Artery* was wounded, and *two* of the *Tendons* of the *Flexores Digitorum*, or *Muſcles* which move the *Fingers*, quite divided. Their *Extremities* were actually ſeen by all *By-ſtanders*. Within an *Hour* after the *Wound* was given, I was ſent for; it had bled much; but what with *Napkins* kept cloſe on, together with the coagulated *Blood*, the great *Flux* was in ſome meaſure check'd. When I came in, I found a *Dutch Phyſician* there, who when I propoſed to *ſtitch* up the *Wound*, would by no means have it done; ſo I dreſſed it only with the *Medicines* commonly uſed by us *Surgeons*, and bound it up: But at *Midnight* I was alarm'd, that he was bleeding to *Death*. I made all the haſte I could to him; when I came, I found him fainting, and having great *Convulſions*. I found *two Chamber-pots* of *Blood* that he had loſt, before I could come to him, beſides what was loſt on the *Ground*, *Sheets*, *&c.* I preſently put my *Thumb* on the *Artery*, which beat and bled with that *Violence*, that it almoſt threw off my *Thumb*; and altho I made ſeveral *Applications* of the beſt common *Reſtringents*, I could not in the leaſt ſtop the *Flux*, ſo I

ſent

ſent the *Man's Wife* for ſome of Dr. *Colbatch*'s *Pouder* I had by me at my *Houſe*, I having forgotten to take it with me. When ſhe came, I having no Water by me, mixt it with the *White* of an *Egg*, and with a *Pledget* of *Lint* applied it to the bleeding *Artery*, and another the whole length of the *Wound*, uſing only ſuch moderate *Bandage* as was juſt enough to keep on the *Applications*. In a *moment* the *Flux* of *Blood* was intirely ſtopp'd, and he ſlept well all *Night*; but on the next *Day* he was a little in *Pain*; ſo I took off the *Roller*, and juſt lifted up one of the *Pledgets*, from under which came away about *half* a *Spoonful* of extravaſated *Blood*, which had been pent up by the glutinous *Quality* of the *White* of the *Egg*. After the diſcharge of which he was preſently at eaſe. I opened it not again till *four Days* after, at which time there was by the ſame *Dutch Phyſician*, and *two Engliſh Surgeons* my *Friends*; when to the great *Amazement* of us all, the *Artery* was quite hid, the *Extremities* of the divided *Tendons* not to be ſeen, and the whole *Wound* incarned, ſo that only *Cicatrization* was wanting. In *fifteen days* time he was well, and had the uſe of his *Hand* as well as ever in his *Life*; and the *Pouder* was never but twice applied.

ROBERT BAKER.

FINIS.